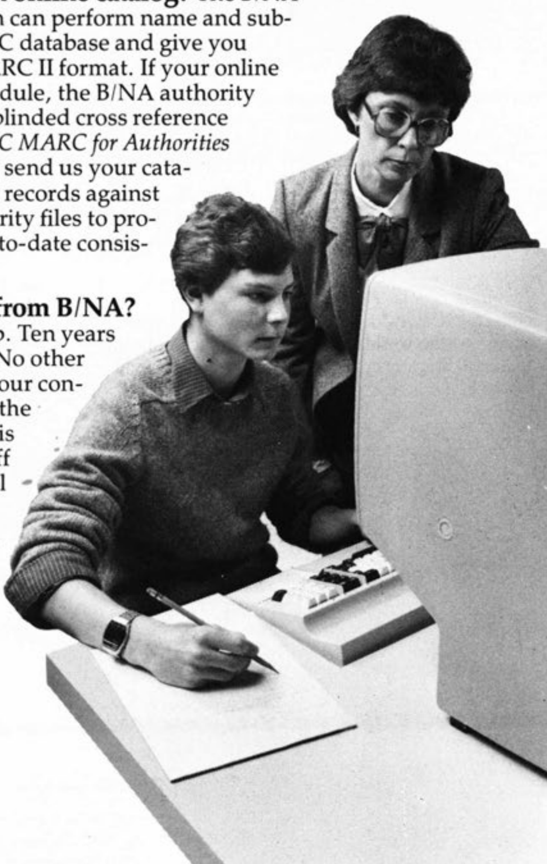
COLLEGE & RESEARCH LIBRARIES

MAY 1985
VOLUME 46
NUMBER 3

C&RL



COLLEGE & RESEARCH LIBRARIES

MAY 1985
VOLUME 46
NUMBER 3
ISSN 0010-0870

PAGE **CONTENTS**

COLLEGE & RESEARCH LIBRARIES

EDITOR: Charles R. Martell, California State University, Sacramento, CA 95819

BOOK REVIEW EDITOR: William G. Jones, University of Illinois, Chicago, IL 60680

RESEARCH NOTES EDITOR: Gary Lawrence, Systemwide Administration, University of California, Berkeley, CA 94720

ASSISTANT EDITORS: Dorothy Koenig, 230 Kroeber Hall, University of California, Berkeley, Calif.; **Larry Oberg,** Lewis-Clark State College Library, Lewiston, Idaho

College & Research Libraries (ISSN 0010-0870) is the official journal of the Association of College and Research Libraries, a division of the American Library Association. It is published bimonthly at 50 E. Huron St., Chicago, IL 60611. Second-class postage paid at Chicago and at additional mailing offices. **POSTMASTER:** Send address changes to *College & Research Libraries,* 50 E. Huron St., Chicago, IL 60611.

Manuscripts of articles and copies of books submitted for review should be sent to the Editor: Charles R. Martell, Editor, *College & Research Libraries,* The Library, 2000 Jed Smith Dr., California State University, Sacramento, CA 95819. Phone 916-454-6466.

Instructions for authors and further information on submission of manuscripts are included in a statement on p.105–06 of this volume of *College & Research Libraries.*

Production and circulation office: 50 E. Huron St., Chicago, IL 60611. Advertising office: Art Beck, Advertising Sales Manager, *Choice,* 100 Riverview Center, Middletown, CT 06457, 203-347-1387. Change of address and subscription orders should be addressed to *College & Research Libraries,* for receipt at the above address, at least two months before the publication date of the effective issue.

Annual subscription price: to members of ACRL, $17.50, included in membership dues; to nonmembers, $35. Retrospective subscriptions not accepted. Single copies and back issues, $7.50 each.

Inclusion of an article or advertisement in *College & Research Libraries* does not constitute official endorsement by ACRL or ALA.

A partial list of the services indexing or abstracting the contents of *C&RL* includes: *Current Index to Journals in Education; Information Science Abstracts; Library & Information Science Abstracts; Library Literature;* and *Social Sciences Citation Index.* Book reviews are included in *Book Review Digest, Book Review Index,* and *Current Book Review Citations.*

Editorial

Autonomy and Bureaucracy

When I was a boy in Boston, the works of Nathaniel Hawthorne, Ralph Waldo Emerson, and Henry Wadsworth Longfellow were schoolroom standards. I recall that the most educated men in the colonies were alleged to have relied heavily for their earthly inspiration on just three works: the Bible, *Pilgrim's Progress,* and *Paradise Lost.* I envied these men. I envied their ability to reach a state of earthly contentment based on exposure to so few works. As a boy I even felt guilty that my need to find universal meaning required exposure to a wider range of literatures and experiences.

Today, my introspective abilities are more sophisticated. I realize now that, unlike some early colonists, I have difficulty accepting without question the givens provided by others. In my view, established standards need to be challenged regularly in order to verify their continuing viability or truthfulness.

Upon entering librarianship, I was told that our professionalism is, as a given, naturally circumscribed by its bureaucratic setting. While I acknowledged this setting, I added "but it is not *by definition* naturally circumscribed."

Generally, the bureaucracy facilitates our traditional attitudes and behaviors rather effectively. It has even shown a remarkable degree of flexibility in accommodating rapid changes in automated technologies. My interpretation is that the limits on our professionalism are largely self-imposed. The bureaucracy is our agent. If it circumscribes, then that is our will.

One of the severest tests that bureaucracies face occurs when members want to increase their autonomy. In librarianship the existing level of autonomy is sufficient to allow us to carry out our traditional roles satisfactorily. Therefore, we do not need any significant lessening of bureaucracy. There is notwithstanding a role beyond the traditional one.

In his working paper, "1985–1995: The Next Decade in Academic Librarianship," the first part of which appears in this issue of *College & Research Libraries,* Allen Veaner describes the outline of this role. According to Veaner, "the broad and general removal of production/manufacturing work from academic librarians is *the most important change and the most valuable opportunity* now before the ACRL community." Librarians are urged to move away from a "passive, reactive behavior" and to adopt an active and creative role. To fill this role we will have to move from the information business to the knowledge business. We will have to move our focal point of attention to the space between the printed word (or the visual image) and the human mind. This is the information transfer zone.

In the *Client-Centered Academic Library,* I define information transfer as "the degree to which the knowledge contained in a communication enables the receiver of that knowledge to move nearer to desired and/or beneficial outcomes for that user." If we begin to offer analysis, synthesis, and informed judgment about the content of materials, if we become involved in the degree to which our clients are successful in using the library, then, as librarians, our need for more autonomy will be obvious and compelling. At this time a further lessening of bureaucracy will be necessary.

In the July issue, the second part of Allen Veaner's article will appear. It deals with the types of knowledge, skills, abilities, and attitudes librarians will need in the next decade. The requisite shift in the responsibilities of academic librarians will mandate major role changes. The issues of autonomy and bureaucracy will become increasingly important, not less so, especially if we attempt to increase the relevancy and responsiveness of our libraries to external needs. In this sense, Allen Veaner's emphasis on the people factor, as distinct from collections, is crucial. In order to move into the information transfer area, we, as librarians, must decide to change the traditional role. This process has unusual implications for our current bureaucracies since knowledge work requires that we set aside time-honored professional constraints that provide narrow limits on what we will do for our users. It requires that we develop new roles and new expectations about how those roles are performed.

CHARLES MARTELL

1985 to 1995: The Next Decade in Academic Librarianship, Part I

Allen B. Veaner
With a Preface by Page Ackerman

This article is based closely on a working paper commissioned by the Academic and Research Libraries Personnel Study Group of the Association of College and Research Libraries, a division of the American Library Association. Its purpose is to "explore the implications of the changes to be expected within the foreseeable future (1985–95) in the environment, mission, functions, and operations of academic libraries (from junior colleges to large research universities) on librarians and librarianship." [Letter of January 25, 1984, from Page Ackerman, chair of the study group, to the author.] *The author has been asked to maintain a focus on working librarians, not chief administrators. Current views and forecasts about the future of academic librarianship cover a very wide spectrum, from the apathetic to the desperate and frenetic. Fortunately, calm and reasoned considerations can also be found; it is believed that these form a sound basis for future programs and actions by ACRL. Although we are passing through an era of very rapid technical change, the author has chosen to focus upon certain constants in scholarship and education. In planning for the future, the author counsels care and thoughtfulness coupled with reasonable dispatch and avoidance of promises of panacea.*

PREFACE

In January 1982 ACRL established the Academic and Research Libraries Personnel Study Group to assess the adequacy of ACRL's current personnel programs and priorities, and to suggest initiatives needed to assure a suitably comprehensive program, coordinated within ALA as deemed useful. The study group consisted of representatives from the Academic Status Committee, the Chapters Council, the Continuing Education Committee, and two discussion groups (personnel administrators and staff development officers), plus three members at large including the chair.

By January 1984, the study group had concluded that, although current programs were well designed to respond to membership needs, ACRL was not well positioned to exercise effective influence or leadership in anticipating and addressing changes in academic libraries that may significantly affect the academic librarian's future contribution, status, and welfare. With board approval the study group commissioned Allen Veaner to write a working paper exploring the implications for librarians and librarianship of the changes to be expected within the next decade in the environment, mission, functions, and operations of academic libraries of all types. We also asked him to consider ACRL's appropriate role in responding to such change. Our objective was to provide

---

Allen B. Veaner is a library consultant, 45 Inglewood Drive, Toronto, Ontario, Canada M4T 1G9. Page Ackerman is chair of the Academic and Research Libraries Personnel Study Group of ACRL.

The author thanks the many readers who reviewed the full-length report on which this article is based. He especially wishes to thank the members of the ACRL Academic and Research Library Personnel Study Group, who contributed valuable criticism and suggestions on early drafts. He also thanks Susan Klement, his wife, who went over the paper very carefully, brought fresh views from other perspectives of librarianship, and patiently assisted with many aspects of content, style, and composition.

ourselves with a speculative context within which we could develop useful recommendations for ACRL. We have found the working paper provocative as well as useful and hope that it will stimulate widespread discussion among academic librarians.

Mr. Veaner's paper represents his views, not those of the study group members nor of the members of the committees and discussion groups they represent. Because the Academic Status Committee has reservations about the paper's treatment of issues directly affecting professional employment standards, responsibilities, and related questions, their comments accompany the original working paper and should ideally be read in conjunction with it. The study group hopes to approve a final draft of its report and recommendations to the ACRL Board at the 1985 Annual Conference—*Page Ackerman.*

THE CONTEXT OF ACADEMIC LIBRARIANSHIP[1]

A Rapidly Evolving Context

New theories of scholarly communication are evolving. They range widely, from the possible and probable to the fanciful and unlikely. In recent years there has developed a substantial body of "library science fiction" that has deemphasized collections, collection development, and the role of human intelligence as embodied in librarians. Leaning upon the wonders of digital communication and electronic technology, there has arisen a thesis that the whole contents of collections currently maintained by libraries—books, films, journals, videotapes, etc.—are simply "containers" for large supplies of "information" buried therein. It is as if the library is a mine or well and that by bringing in the right equipment, its contents can be conveniently tapped, extracted, or drawn off. In this scenario, academic librarians as they now exist are but keepers and custodians of the containers, or "markers and parkers" at best. In the words of Cronin (1983), the proponents of such theses view the librarian/information professional "as a latter-day dinosaur or brontosaurus, unable or unwilling to come to terms with a changing landscape." Cronin adds an insightful coda:

> What is most revealing about these analogies is their inflexibility; invariably the projections are linear, based on fuzzy data and 'surprise-free.' And, of course, the whole point about the 'third wave' is that it is going to drench us in surprises.[2]

The chimeric aspects of this dinosaur thesis ought to be self-evident: First, there is ample evidence to contradict the notion that the librarian/information professional has no capacity to adapt. Next, no matter what technological advances occur within the next decade, human beings will continue to rely upon systems of recorded knowledge that reside in collections maintained by institutions dedicated to the preservation and communication of their contents to the community of students, researchers, and scholars. Furthermore, these collections do not select or organize themselves but require specific human intervention. Nor, in the modern era, do such collections come into being as the consequence of the effort of a single person, or even a small group of persons; today's collections have an institutional dependence as never before. Regardless of nomenclature or form of material, the institutions that maintain these collections will continue to be libraries. Ultimately, it is society itself that must support the academic library as a public good.

For many reasons the responsibility for maintaining collections of instructional and research materials covering every time span, every country, every civilization, every language cannot be delegated to the private sector. The private (and some not-for-profit) sectors are driven by different motivations than the academic sector; they cannot be expected to take responsibility for the totality of human scholarly endeavor and interest. Of course the private and not-for-profit sectors effectively market a number of useful access and control systems (some developed at public expense)—systems that can provide citations, and increasingly, full text. But the idea that these systems "mine" information must be dismissed. "Information" is touted as a commodity, a concept that may be valid in the business world.

But the information and knowledge of the academic world cannot be canned. Information and knowledge are spiritual relationships among humans, mental constructs that exist in the mind—not as marks on paper or bits on disks.[3] In colleges and universities, academic librarians select and organize the materials of instruction and research, acting as vital links between collections and users. In the complex and dynamic interrelationships that occur in the process of scholarly communication, especially in the creation of new knowledge, librarians constantly demonstrate their polydimensionality: they and their collections are vehicle, wheel, axle, and linchpin; vessel, compass, sail, and rudder. This is currently the case and will likely continue to be the case for the remainder of the twentieth century, perhaps even beyond.

Educating Scholars, Faculty, and Administrators, 1985 to 1995

Because academic librarianship is a life of the mind and not a job of simply managing a warehouse of physical materials, we should always stress the intangible aspects of library service. One useful way to emphasize this idea is to promote the concept that the library is not a place but a service. Academic librarians—not the facility in which they work—ought to be conceived as the providers of the library's services, as *the* source of information, data, responses, answers, and intelligent dialogue. But virtually all our promotional materials promote libraries. Posters, spot advertisements on radio, TV, or other media, and National Library Week all focus on the institution, not the professional staff, as the source of information.[4] Might we profitably use a National *Librarians'* Week? At least academic librarians ought to devise public relations programs that focus upon the special education and subject expertise of librarians. Our clients should be urged to come not to the library collection itself but to those marvelously expert, well-educated, and highly trained intermediaries—the librarians. They are the professionals who transform the inert, dead contents of the institution into "information"—the live communication that alters the behavior of the client.

In 1982 ACRL began a three-year experiment with nine nonlibrary professional associations to promote the awareness of the potential values of bibliographic instruction (BI) in the learning process—an important and significant contribution to extending an understanding of the teaching role of academic librarians into the academic community at large. Five of these associations are members of the American Council of Learned Societies (ACLS).[5] Such workshops and seminars can be of incalculable value in changing the perception of the librarian and the librarian's place in the academic process. Collaborative programs will be expensive and their returns visible only in the long term. ACRL ought to continually evaluate cooperative programs, improve them, and reach out systematically for the remaining membership of the ACLS and the membership of other, similar societies in the U.S. and Canada.[6]

Programs are sorely needed to make educational administrators aware of what academic librarianship is truly about. Moffett (1982) reports a series of dismal incidents from librarians and library administrators that illustrate the lack of understanding among faculty and campus administration of the role of the academic librarian. The images are familiar: librarians emerge "somewhere between secretaries and warehouse supervisors," are regarded as "technicians or bureaucrats," but not as peers or collaborators. Concerted efforts at both institutional and national levels are required to combat such damaging misperceptions. At the local level, the effectiveness of any educational campaign will depend almost entirely on the chief librarian's political skills and creativity; where those skills are lacking, there can be little hope of success. The problem of communicating adequately with educational administrators is national in scope; it deserves the same kind of aggressive campaign now being conducted with the scholarly organizations. ACRL should investigate the feasibility of organizing educational programs to communicate a better understanding of academic librarians' special responsibilities, knowledge, and skills. Such campaigns may be beyond the current expertise of the profession itself; likely they will entail expensive contracts with specialized firms or consultants and a continuing commitment with payoff in the distant future.

Governance in Academic Libraries

Among large libraries functional departmentation has virtually dictated hierarchical structure. Large libraries are distinguished from small in a fundamental aspect inherent in administration itself: the chief role of administration is the unequal allocation of limited resources—the decision to support Program X and cease supporting Program Y. Such decisions cannot easily be reached by committee, collegial decision making, or other democratic processes. Most especially such decisions are extremely difficult to reach if they include termination of staff. In a paper dealing with educating library professionals, Battin (1982) argues that in the large research library, the idea of librarians constituting themselves as a corps of autonomous professionals (like faculty) is untenable. The faculty model of a group of loosely affiliated, autonomous colleagues governing themselves along collegial lines may work in teaching and research, maintains Battin, but cannot be implemented in the large research library.

The idea that hierarchical structures will decline in the developing "information society" is pervasive in much of the literature that deals with the future, and to some extent was a theme at the Third ACRL National Conference.[7] The decline of hierarchy and its replacement with democratic styles of governance is especially appealing to employees who grew up in the comparatively affluent post–World War II era and went to college in the "permissive" 1960s. For many of them the idea of hierarchy is repugnant and unacceptable. While it is true that many libraries implemented limited "democratic" or participative forms of governance and administration beginning in the late 1960s, among very large libraries the fundamental hierarchical pattern remains with practically undiminished strength.

If hierarchy declines as a structural style, it is likely to occur first among small, highly technological industries where almost all the manufacturing is automated, and operations are run by a "college" of managers who have heavy financial stakes in the enterprise. The environment of small units—the college library, the junior college, or community college library—is suitable for a collegial, nonhierarchical style of governance and operation, especially if all production (i.e., "manufacturing") can be handled by computers, networking, or clerical staff (no manual files to maintain, little or no cataloging to do, fully automated circulation system, and stack maintenance run by clerks). This would leave a "college" of librarians to share authority and responsibility for the intellectual connection with faculty and academic programs. In such an atmosphere it would be comparatively easy for a small group of professionals to share in major programmatic and resource allocation decisions.

Of course, the issue of governance in the academic library cannot be oversimplified by postulating large and small units, with the former hierarchical and the latter collegial. Assuming that the librarian is to be "deinstitutionalized," that access to information is to be democratized via personal computers, that hierarchy might break down in some organizations and remain in others (e.g., the large research library), what governance structures can be postulated for academic librarians? Is collective bargaining the answer throughout academe? Would it be useful for ACRL to commission studies of changing organizational structures in libraries? Would the results be a spectrum of structures, varying according to library program and institutional character? Would such a study be too theoretical, inevitably behind the realities of the field?

In the final analysis, the matter of governance will be resolved at the local level (or the system level, for the large, multicampus institution). This observer suggests that the governance issue, though important, may be less weighty than the role issue for librarians. If the academic librarian's role in the institution's intellectual life can be assured, the librarian can accommodate to almost any governance style, much as faculty have. But closure on the issue of role ought to precede concerns about governance.

Competition, Incentive, Commitment, and Restructuring in the Bibliographic Enterprise

"Deregulation" is remolding U.S. business and industry through the encouragement of competition. Is there an equivalent for personnel administration in academic libraries? Within current college and university structures the answer must be no, for the library is still a campus monopoly, the Ma Bell of academe, its professional staff residing in a well-protected enclave. But new technology has the capacity to break this monopoly as faculty and students send electronic tentacles out to commercial databases and use electronic mail to communicate with expert colleagues elsewhere. The breaking of any monopoly strongly suggests opening up opportunities for competition in academic library work. Devising humane systems for fostering a competitive spirit will be a principal challenge to library administrators.

Competition can originate internally and externally. Internally, librarians can be stimulated to compete with each other, to put out their best creative, innovative efforts, to communicate and publish more, to participate fully in the profession. Externally, competition is not within the control of librarians but originates from the information services offered by the private sector, where the initially harmless barking at heels by small dogs has now become the howling of hungry wolves.

In business and industry one of the most attractive ways of stimulating commitment is the provision of opportunities for young managers and executives just beginning their careers to buy into the firm as part owners. To some extent such an arrangement is available in the professoriate, where tenured faculty in an academic department control an academic program within the university or college's basic charter; this in fact is what a college really is—a cluster of intellectual experts who control educational resources. Except for the library-college movement that flourished in only a few institutions, this style of collective "ownership" and commitment has never developed in the academic library. The middle-sized to very large academic libraries remain hierarchical bureaucracies whose organizational structures have a tendency to foster overattention to narrow specialization and comparative inflexibility. Only in the smaller academic libraries is the collegial pattern practical. Can a method be developed to overcome bureaucratic inertia? Is it possible to restructure larger libraries so that academic librarians can, like their counterparts in business and industry, build institutional commitments that result in self-motivated continuing education, self-motivated attention to development of time- and money-saving schemes, self-motivated outreach to clientele? In the large library, the question might be asked whether departmentation, a pattern now half a century old, has not outlived its usefulness and has become counterproductive.

Many distinguished librarians and educators have spoken of recasting the profession to stress it as a unity of human (i.e., intellectual) and physical resources, plus a communication system (e.g., bibliographic traditions and networks) dedicated to the whole complex information processing enterprise. It is vital that such ideas percolate down to the rank and file of academic librarians, not simply remain as abstract concepts in the minds or offices of administrations. Abell (1982) has proposed shifting academic library organization from its present function-oriented structure to one directly related to broad disciplinary groupings.[8]

Such a proposal can be implemented in virtually any size academic library and has the merit of moving away from the currently popular "aggregate of independent functions" structure to something more integrated, more academic. ACRL can hardly be expected to postulate idealized (and probably unworkable) structures for every size and type of academic library, but Abell's proposal to restructure the academic library is worth pursuing as a theme for a future national conference: "Restructuring the Academic Library in an Era of Rapid Change." This would fit in nicely with Battin's urgings for a restructuring of the entire university apparatus.[9] The distinct structural needs of medium-sized universities, colleges, and community colleges could emerge from conference dialogue and position papers prepared in advance. Regional workshops could assist in spreading the restructuring ideas proposed by Abell (1982) and others, and in developing alternative concepts.

Returning to the matter of incentives, one can summarize the issue by asking whether a nonprofit institution can adopt useful profit-sharing techniques so that its members can get "a piece of the action." Can the academic library devise incentive systems, so successful in industry, to stimulate productivity and innovation?[10]

On the faculty side, Koerner (1977) deplores the professor's preference for writing a scholarly book for a "tiny readership" to "creating a technology-based curriculum for large groups of undergraduates." In respect to incentives, he goes on:

> Private industry learned long ago that incentive and bonus systems built around increased efficiency, cost-cutting ideas, and improved service, can pay for themselves many times over. Comparable systems in higher education are nonexistent, but the possibility of creating them deserves examination.[11]

The creation of incentives for excellence in the academic library is a major challenge. Lack of adequate institutional incentives has persuaded some librarians to flee to the for-profit sector or go into business for themselves as information brokers or purveyors of other information-related products or services.

There are also the questions whether professionals can be motivated to adopt a less reactive stance to the bureaucratic environment, and whether or not the structure itself can eventually be changed. In large organizations, ponderous bureaucracy encourages proactive behavior less than a "company ownership" structure where survival depends upon productivity. Although the environments are not precisely comparable, it may be noted that special libraries in business and industry are claimed to be more service oriented than are academic units—because the survival of the company library is perceived to depend heavily upon immediacy and quality of service. Company survival, too, depending upon the size of the company, might be perceived as at least partially a function of the quality of library service. Can any of the "survivalist" attitudes from special librarianship be transferred to the academic environment? Can a structure be devised that librarians can "buy into" or "own" to help develop incentives to excellence?

"De-Recruitment"

It is no surprise that the academic library, like any other complex enterprise, has problem personnel. The presence of unproductive people cannot be attributed to single causes. In an acerbic review, Yerburgh (1983) rails against recruitment practices that bring weak people into the profession.[12] He attributes many of the professional's personnel deficiencies to a lack of both "enlightened leadership and gifted members of the rank-and-file."

Every manager cherishes the fantasy of administering a library unfettered by those who consume institutional dollars but do not produce. Many of these are the "lifers" in the educational bureaucracy, whom Yerburgh calls the "little gray men and women." They are the people who belong to no professional associations, attend no conferences, do no committee work, write no papers, analyze no problems. They are the people who have found a "parking spot," who can be counted on to come in a bit late and leave a little early, and not miss any coffee break. Forced by institutional structures to rely on attrition, many managers are reduced to coping with the "lifers" by keeping in their desk drawers a dated list of upcoming retirements as an aid to personnel planning. Is there a better way?

Librarians weed books unhesitatingly. Pruning staff is undertaken with less enthusiasm. The profession has no method in place for "de-recruitment" or outplacement. How does an institution rid itself of deadwood? Can humane systems be devised to identify and deal with staff members who are unproductive, incapable, or unwilling to retrain?

Every institution has a social obligation to long-term employees; such obligations may be secured by contract, law, or custom. The principal challenge is financial, as administration would have to "buy off" such persons through attractive early retirement schemes, and the money for that competes with the budget for productive work. Because the profession has done little to cope with this type of problem, it is left to the administrator to resolve—with sometimes grudging assistance from institutional attorneys and personnel managers. It would be very difficult, perhaps impossible, for ACRL to enter this sensitive and difficult area; the best hopes lie in encouraging member institutions to uplift their hiring standards and not hire weak candidates, and in urging the schools to raise their admission and retention standards.

Fragmentation and Restructuring

In the light of so much fragmentation in the profession itself, one might ask whether ACRL's current organizational structure is suitable to the achievement of its mission. In many ways, ACRL represents the ultimate in the professional fragmentation so characteristic of librarianship. The *ALA Handbook of Organization* for 1983/84 reveals that ACRL is comprised of nearly 250 separately identifiable units.

Nearly all the major library associations in North America are similarly divided into a seemingly infinite multiplicity of interest groups. Perhaps this atomization merely reflects the general academic fragmentation that has characterized research since the nineteenth century. Internally, we debate the profession's inability to speak with one voice, yet the responsible forces may be the same ones that divide the entire academic establishment into so many parts. Institutional structures, such as hierarchy and departmentation in the larger libraries, assist the process to the point where isolationism can develop to ridiculous extremes.[13]

Automation has undoubtedly contributed very positively and powerfully to the breakdown of artificial barriers unintentionally constructed through departmentation. Personnel exchanges, rotations, dual assignments, and other techniques have also helped to ameliorate the consequences of fragmentation. Other artificial walls of false elitism have been built upon the layered rankings of institutional prestige. The facts of high prestige and high institutional quality should not inhibit the free and ready interchange of ideas and collegiality at the national level. Continuation of the regional ACRL conferences is a strong integrating tool on behalf of the membership, a device that promotes desirable exchange of ideas from all types and sizes of academic libraries.

Much of ACRL's structure perforce mimics the complexity of the parent organization. Given the rapidly developing technologies supportive of institutional restructuring, the growing trends toward decentralization in government and society at large, and the evolution of new designs for work itself, is it not appropriate for ACRL to review its own structure?

Low Visibility on Campus

The low visibility of the academic librarian's role in education may be attributable in part to traditions of passive, reactive behavior or, in part, to the image of the academic librarian as keeper or custodian. Leaders in academic librarianship have been successfully challenging this tradition in recent years. But, as with a giant oil tanker underway at full speed, there is much inertia to overcome; a huge "establishment" like traditional librarianship does not shift direction instantaneously. Academic library leaders require time to plan and implement initiatives and those in the field need reasonable time and opportunity to adapt. Yet the changes wrought by the computerization of conventional bibliographic operations are, in all probability, the advance guard of even more comprehensive change.

Who are the librarians? A university president, Ilchman (1982), asserts that we have a fuzzy image. The fact that even so critical a document as *A Nation at Risk* failed to mention the library's role in ameliorating serious education deficiencies in the U.S. is very telling. But *how* can we explain to faculty and administrators *what* academic librarians do? For years we have described librarianship's professional and clerical needs to personnel managers and recruitment officers by focusing upon the visible operations that go on in libraries. We have learned to excel in writing position descriptions and job descriptions. Unfortunately, when communicated to the outside world, these descriptive models become a trap in which we ourselves are caught. *A focus upon visible operations denies the fundamental academic character of the librarian's work!* Precisely because academic librarianship deals so much with concepts and abstract constructs, we, like faculty, depend more upon invisible ideas and words than coarse, descriptive pictures to convey our work. Descriptions of the manifold activities administered by librarians can only explain the numerous visible operations largely carried out by support staff—and it is this visible work that confuses the client's mind on what we professionals actually do. Because librarians' true work is as invisible (and indivisible) as the work of faculty, we, like they, need similar supplementary mechanisms to gain visibility. Among those mechanisms are the following:

- high quality scholarly publications
- broad involvement in academic planning and institutional governance
- appropriate participation in the work of learned societies and professional organizations
- collaboration with faculty as expert intermediaries in the research process
- pervasive programs of bibliographic instruction

Faculty Status

Librarians' long-standing concern for their academic status culminated with the award of faculty status in many land grant universities in recent decades, although there has been little progress among private universities and a lack of enthusiasm among the administrators of very large research libraries. English (1983) thinks that the pressure for faculty status has not only "run its course" but may have begun to move into reverse.[14] A current paper by English (1984) suggests that university administrators see no advantage in librarians possessing faculty status; further, English reveals, administrators expect little of librarians in the way of academic achievement.[15]

Nearly all respondents to the author's informal survey conducted for this study pressed for equal status with faculty. One respondent suggested that faculty status was "inappropriate" for academic librarians. This same respondent stated that teaching and research faculty simply do not recognize librarians as their peers and further observed that librarians were unwilling to assume equivalent research, publication, and related responsibilities. Massman (1972) who has studied the subject exhaustively repeatedly cites the point that librarians who expect faculty status must be prepared to meet equivalent criteria for evaluation and advancement.[16] The dilemma, of course, is that while research and teaching faculty can conveniently maintain highly flexible schedules, often with a quarter or semester free from teaching, librarians are normally confined to forty-hour weeks at their work stations, whether in reference, cataloging, or collection development.

The solution to the academic librarians' status problem is not likely to be reached in the bureaucratic arena or on the floor of the academic senate. It is doubtful also whether librarians will gain faculty status via any system of ACRL sanctions or via the application of ACRL standards to academic institutions. It is conceivable that some progress might be made by political alliances with faculty in the collective bargaining arena, but whether the benefits gained would result in an enduring social and intellectual equity is questionable. Once "used" to gain a political objective, librarians might still find themselves relegated to second-class citizenship in the academic community.

It appears to this observer that one key to the improvement of librarians' academic status may be further off-loading of their production work onto support staff. For librarians to reach genuine parity with faculty, it is necessary to get librarians completely out of the "manufacturing" business.[17] Technical service librarians can then join public service librarians in a united professional cadre capable of complementing faculty through several invaluable roles: research colleague, bibliographic expert, information system manager, and information system use instructor. On the other hand, should the Lancastrian model of the "paperless" society and the "de-institutionalized" library come to pass, some librarians might find themselves working as free-lance entrepreneurs—in which case the faculty model could become irrelevant.

The Lawyer/Physician Comparison as Related to Professionalism and Faculty Status

The argument against faculty status in academic librarianship sometimes finds an *amicus curiae* in the view that librarianship is not a profession. The combined argument reaches out beyond the professoriate to other professions, and even to the trades, and goes something like this: Lawyers do not teach their clients to handle their own cases; physicians do not teach their patients how to cure their diseases or how to perform successful surgery; mechanics do not teach automobile owners how to overhaul their cars. But librarians are always sharing their expertise—with faculty, students, and the general public. Not only do they share their knowledge freely; they actually give it away at no charge, a practice long regarded as a social good.

It is then suggested that librarians, by teaching their clients, ultimately work their way out of their jobs, i.e., destroy their jobs by showing their clients how to function independently. (No one directs such criticisms to teachers or faculty; no one says that through the act of instruction, faculty are working their way out of their jobs.) Yet this view ignores the point that *one of the academic librarian's key responsibilities is teaching*. This view also presupposes that knowledge is finite—even though all recognize that information and knowledge constantly grow, that every stage of development, new populations need information—from elementary facts to the most technical theories of science. "New" information is constantly derived from "old" knowledge; even misinformation itself is a legitimate subject. It is the very infinity, the "never-emptiness" of information and knowledge, which makes librarianship one of the world's most exciting professions. If "information" is a well, it is one that never goes dry; it dispenses an infinite variety of refreshment. No, the information profession cannot destroy itself through sharing; if anything the teaching/instructional function serves to enhance the status and essentiality of those who perform it.

The lawyer/physician comparison is weak at best and should not play a role in the issues of professionalism of faculty status. First of all, clients only go to lawyers and physicians in cases of pressing immediate need, often where life, career, family, or financial stability are threatened. Like plumbers and roofers, lawyers and physicians deal mostly with emergencies. Not so with the academic librarian who ideally is the constant partner of student, faculty, and researcher. Additionally, legal and medical professionals typically work with a client on one specific problem, and when work on that problem is completed (or the client runs out of resources), the transaction is terminated. Yet by definition the scope of the academic librarian's work—like that of the faculty—is unlimited, restrained only by the capacity, curiosity, ingenuity, and motivation of the student or colleague; similarly, the time duration of the librarian's work is perpetual. The life of the mind, as embodied in academic librarianship, is not constrained by the artificial barriers of discipline or schedule that delimit the work of attorneys and physicians.

SOME FUNDAMENTAL INSTITUTIONAL CHANGES

From Overhead to Transaction Accounting

Until recently almost every library service was supplied "free" to the user, paid for by institutional overhead. For the financial planners in academe, "information" has indeed been a refractory material—inexact, inchoate, individually tailored to each user, highly resistant to attempts at quantification. Despite many efforts, it has not yet been possible to disaggregate the costs of information services in a way that is politically acceptable in an academic institution.[18] This impossibility is possibly one of the reasons why the overhead pattern of supporting library service has persisted so long. But another reason is that much of the actual work required to access the library's resources has had to come from the users, who already "pay" for this activity by investing their own time and energy. Dedicated public service librarians may wish to challenge that point, but consider the following that users have until recently always had to do, unaided by any external support system, save their own time and energy:

- Travel to the library, a resource that is inaccessible without the user's physical presence.
- Manually search catalogs, indexes, and other access tools.
- Manually fetch and return materials.
- Fill out charge slips by hand.
- Read, digest, abstract, sort, disregard, copy, or otherwise process the materials.
- Negotiate time-consuming procedures for materials not on the shelf.
- Wait a comparatively long time for delivery of interlibrary loan materials.

To be sure, some faculty have grants generous enough to pay graduate students or teaching assistants to do all or part of the above, and some libraries offer expedited delivery of materials direct to faculty offices. But the menial jobs nevertheless must be done and there is a cost associated with their performance. With automated systems, many of the costs formerly "absorbed" by the user are now transferred to systems and apparatuses which demand "real" dollars in payment.

The idea of paying for any kind of library service probably had its origin in the establishment of photoduplication services, the first modern technological device to multiply or amplify scholarly effort. Both photoduplication and computer services, whether in-house or external, require payments that are not marginal but substantially and significantly incremental; these services lay claim on resources that, if not allocated by some pricing and cost recovery mechanism, will be consumed without limit and reduce other expected services, e.g., the provision of reference assistance and the purchase of library materials. It is this resource consumption aspect, suddenly grown to a very large scale with photocopying and computer systems, which has swung the library economy towards transaction accounting in place of the simple overhead, lump sum model. This shift is direct and incontrovertible evidence of the growth of an "information economy" right in the academic environment itself.

Proprietary interests in communication and publishing—whose representatives typically identify themselves as "stakeholders" in such discussions—were the first to articulate this economic model. They staked their claims while many librarians continued to maintain the "free" library service concepts "programmed" into their education. It is because of their proprietary views that the Copyright Clearance Center was established and it is they who continually stress that information is not free. Nowadays one reads of schemes to have microprocessors scan document identification codes, debit a user's account and credit an owner's account via electronic funds transfer. An interesting consequence of the extremely rapid development of electronic mail, personal computers, and such networks services as BRS/After Dark and DIALOG's Knowledge Index is that the acrimonious "fee-vs-free" debate has quieted down somewhat. There is no longer any debate about paying royalties for the use of information; information services of all kinds must be paid for. It is only a matter of deciding how to finance them and how to assure reasonable access to the less affluent and the less literate.

Where there does remain debate is how far computerized information technology will reach into the "information marketplace" to seek profit. One can draw a parallel with microform publishing, in which the academic community has half a century of experience. There the commercial forces tended to select the popular, high-profit items as candidates for microfilming, leaving vast quantities of profitless "research materials" unfilmed, or consigning responsibility for the "bottom of the barrel" to underfunded academic consortia or individual libraries. Should the commercial interests behave similarly with electronically representable information (and there is little reason to suppose that they would do otherwise), libraries could again be left holding the responsibility for access to lesser-used materials but, as with microform publishing, without the funds to carry out the programs adequately. In the end there could be a serious reduction in society's capacity to provide access to scholarly materials. Some have even expressed fears that publicly supported access to scholarly resources might ultimately disappear.[19]

This evolving shift of the academic library's "information economy" from an overhead to a transaction basis merits attention, possibly from the ACRL Ad Hoc Task Force on Research Needs of Academic/Research Libraries. ACRL members from the large research libraries can count on the Association of Research Libraries to defend their interests in this area, but within ACRL itself there appears to be no specific mechanism to deal with this matter on behalf of smaller university, college, and community college libraries. However, in the area of bibliographic instruction, ACRL recently began to work with certain ACLS member societies, and in this related area of mutual concern there may be room for further collaboration.

We can ask another question relating to financing academic library services: is it possible to expand (or contract) library or library-like services incrementally, in accordance with market demand? Financing an academic information service infrastructure on a pay-as-you-go basis would distribute the financial burden throughout all academic departments. If such a scheme could be implemented, light users might press for release from financial responsibility for providing library and information products and services they do not "use" much at the expense of placing unconscionable burdens upon heavy library users—such as students and scholars in the humanities. However, in reality, the light users (e.g., science departments) would not reduce their cash outflow. Those who claim they "use" the library less than the humanities and therefore should "pay" less are referring to the conventional library. The sciences would actually face substantial increases in the cost of acquiring information because of unavoidable access to databases and other electronic information products and services. Such access would also incur increased telecommunications costs, and all fees paid would add up to an enormous cash outflow to the commercial sector. Thus, although it is likely that no one will get a "free ride" in the electronic library, neither will it be the case that a discipline will be able to function without such access. If some library or information services functioned on a metered basis, academic librarians would find excellent opportunities to apply their technical and financial expertise in advising academic departments on how to obtain the best value for the dollar, whatever the product or service—a function that exactly parallels what academic librarians now do with collection development. In such a context academic librarians would be needed more than ever.

Impact of Marketing Information Directly to End User

Vendors' direct marketing to end users, coupled with electronic publishing, could result in gradual decentralization of library holdings, especially if certain "holdings" may have to be redefined. Also, if electronically produced publications are "distributed," either in electronic form or in hard copy, and subject to online annotation, revision, and change, a document no longer exists as a fixed corpus. Under these conditions what will happen to conventional bibliographic control? What will be the role of a cataloger? Is it reasonable to suppose that the protocols for online publication will include "self-cataloging" features—perhaps prompted online via expert systems? Will catalogers be needed at all?

Direct marketing of database search services to the end user is but an extension of a long-established pattern in educational publishing, a pattern that has its roots in the marketing of textbooks and microform publications for schools and colleges. Historically, in both instances publishers typically bypassed librarians and applied their sales pressures directly to the end users, the faculty, who in turn were expected to influence bookstore or library purchase decisions. Similar pressures on campus authorities might persuade them to divert institutional funds from libraries to commercial information services.

Currently, an independent end user faces (1) formidable technical difficulties searching databases and (2) severe financial penalties for inexperience and incompetence. There are probably over 2,000 databases now available and the protocols for searching them vary considerably, despite the pressures for normalization imposed by DIALOG and BRS/After Dark. Popular literature often has physicians and lawyers bent over terminals directly accessing information vital to their concerns. In fact, it is far more likely today that these professionals will delegate such tasks to their support staff—medical secretaries, legal paraprofessionals, librarians. Librarians who search are well aware that regular—perhaps daily—experience is required to maintain expertise and keep up with system changes. It remains to be seen whether end users will acquire the expertise to do their own searching effectively and economically. Stirling's dictum that "seldom readers are slow readers" applies *a fortiori* to database interaction.[20]

White (1983) has raised a basic, practical objection to the whole concept of searching by end users:

> . . . we are still wedded to the forlorn and injudicious hope that somehow we must allow the researcher to maintain direct contact with the publications in his field. Forlorn because there is little evidence that he is either interested or competent in doing so. Injudicious because the best hope for this profession and its practitioners, be they called librarians, information officers, or documentalists, is that of assuming the crucial role of information intermediary between the researcher and his literature.[21]

Decision makers and researchers, White maintains, are not looking for more documents but for analysis: "[T]hey want to know if they [the documents] contain anything germane to the solution of their present problem." White concludes that it is a myth that end users want to do their own searching. He obviously would agree that in colleges and universities responsibility for this task is best delegated to the academic librarian. White's conclusion is undoubtedly valid at this time, and it seems unlikely that librarians are in immediate danger of losing their gatekeeping role. However, challenge is ever present: the National Federation of Abstracting and Information Services (NFAIS) has just announced EASYNET, "a new service which will make online database searching possible for the untrained end user, in libraries, offices, or campus, and at home via personal computers."[22] The technical and marketing forces exemplified by the NFAIS program will certainly be tested and their outcomes worth watching.

In the matter of direct database access by the end user, it may be risky to extrapolate current cost and complexity conditions linearly. Technical devices and software are changing so rapidly that it would be unwise to ignore the potential of direct marketing. When digital communication networks replace voice grade facilities, telecommunication costs might indeed come down. When self-instructional "expert systems" are loaded into personal microcomputers far more powerful than those we have today, database searching might become much easier. Finally, one needs to face the fact that what is "difficult" for today's "seldom readers" might seem fairly simple to tomorrow's students who are growing up with terminal keyboards in their laps. Direct access by the end user and its potential risk to the academic librarian's intermediary role are areas where ACRL ought to post a "technology watch."

The Information Budget

Future interinstitutional cooperation will not be based on noblesse oblige; courtesies that can be afforded when transaction volume is low tend to be discontinued when demand rises. Just as we pay vendors for new electronic services—telephone access charges, connect time, lines printed, bits transmitted—and pay each other for interlibrary loan transactions, so will we probably exact charges from each other for all information-related transactions. Such a situation is not new in any sense; internally, universities have done this for years by a system of recharges for services rendered by facilities management agencies (systems office, controller's office, paint shop, etc.). The difference will be in applying the recharge system to a resource that has, by tradition, been "free." Academic departments will probably have "information budgets," not unlike their budgets for telephone service, new office furniture, repainting of quarters, and the like.

What will be the impact upon the academic librarian? An immediate suggestion is that librarians will also be responsible for these "information budgets," which will include not only their time but all the machine and electronic resources at their command. Because librarians will be the management experts in information systems, they will continue to develop and apply their professional expertise by advising faculty, researchers, and students on the administration of information budgets. In fact, one can expect to find academic departments delegating their "information budgets" to librarians, much as they have, in effect, already done with the library materials budget for a generation. As with library materials, these "information budgets" will contain real money—not "funny money," and librarians will be held closely accountable for their effective management.

THE END OF LIBRARIES?

We rightfully remind ourselves that the computer is merely a tool. But the adverb "merely" may fail to convey the distinguishing character of the device. Many earlier tools and techniques were but linear extensions of a scholar's personal capacities or, more frequently, convenient extensions of physical rather than intellectual abilities. The telephone eliminated distance as a consideration in verbal communication; the photocopier replaced slow, cumbersome note-taking. But because the computer, to use Doug Engelbart's expression, "augments human intellect," its impact is nonlinear.

The idea of a nonlinear tool is amplified in an extraordinary and provocative volume, *The End of Libraries,* by James Thompson, chief librarian of the University of Reading (UK).[23] In his book Thompson integrates the past, present, and future of academic libraries, portraying a picture of rapid, fundamental change. He correctly characterizes computer technology not as simply "another tool" but as a "preemptive technology," one that inevitably supersedes its predecessors, one that will make it impossible for libraries to continue as they have in the past.

In regard to the current argot, "user friendliness," the electronic medium has been characterized as not "user friendly." But is the modern academic library user friendly? Finding one's way about a major research library, especially its bibliographic control apparatus, is a formidable challenge; learning to use a terminal for a variety of applications might indeed prove much more pleasant. Line intimates that users might desert libraries for terminals "which may have their limitations but may also have fewer user-hostile elements."[24]

Those of us who have worked our entire professional careers in academic libraries of any size cannot really speak to the issue of "user friendliness." We have been spoiled by experience, education, and ready access to collections; we can take for granted an understanding of a very complex bibliographic apparatus. What of the less fortunate? From their viewpoint, libraries as currently organized and administered are perceived as mysterious, unresponsive, ponderous bureaucracies, obstacles to the whole information process. To paraphrase Thompson, the problem for ordinary users is that libraries, in an absolute sense, can never be convenient.[25] Mysteriousness and inconvenience, once the hallmarks of the computer, have been almost completely eliminated; today a computer commands about as much notice as a bicycle. Computers and software are gradually giving users greater and greater power to cut through bureaucracy, formality, and red tape, to extract what they want from data files and information systems—but at a price.

Additional impetus to change will come from library users, especially new faculty and new students who will bring considerable computer sophistication and a lack of tolerance for the inconvenience of traditional libraries. It is up to academic librarians to perceive these changes in users' attitudes and expectations while they are in their formative stages—before they have coalesced into political forces that can damage the library and its interpreters. Academic librarians need to find ways to seize the initiative, to lead these changes, and not simply be dragged about by them.

Thompson's views, while stimulating and valuable, convey a certain unjustifiable panic in their tone, almost as though traditional academic librarianship were about to collapse in an instant. The cautions noted by Bell (1973), Cronin (1983), and De Gennaro (1984) are all worth bearing in mind when we hear about the "end" of libraries. But a special value of Thompson's analysis is his conclusion, which vigorously stresses one of the academic librarian's most important responsibilities, viz., to organize information, a talent not always appreciated by computer specialists, some of whom have very little experience beyond the purely technical.[26] This responsibility remains, no matter what form the academic library of the future takes. So does the librarian's role as link and catalyst in scholarly communication.

POSSIBLE/PROBABLE FUTURES

A Shift from "Make" to "Buy"

New technology and continuing budget crises are gradually forcing academic librarians to come to grips with "make or buy" decisions, a choice that hardly existed before computers brought about a certain degree of "industrialization" to bibliographic processing. We can no longer afford to manufacture what is available ready-made. Lancaster (1982) forecasts a rapid dwindling of technical services, because "electronic sources do not need to be selected, acquired, cataloged (at least by individual libraries), prepared for the shelf or bound."[27] Brownrigg (1984) suggests that in the upcoming electronic era, cataloging responsibility will shift from the buyer to the publisher who will use it as a valuable marketing and promotional tool. The present author (1982, 1984) has suggested that technology be employed to dismantle massive technical services operations in order to redeploy resources. Aveney (1984) points out that full automation really means that the acquisitions department simply disappears, and whatever is left of the cataloging department works in museum fashion with artifacts, viz., rare books. Neil (1980) is worth quoting:

> What will be different is the behind-the-scenes activity. For one thing, cataloging, its golden age passing a hundred years after Cutter said it had, will have disappeared from the worksroom [sic], replaced by a small computer to store the library's records and a terminal to access the central shared cataloging system.[28]

The mental and intellectual capacities of academic librarians have become strained, exhausted, and worn out prematurely by the unconscionable manufacturing burdens of bibliographic housekeeping work. Thus far we have tried, with mixed success, to use automation largely to relieve ourselves of this arduous work. More vigorous efforts to buy bibliographic products and services in preference to in-house manufacture can help academic librarians redirect their energies into other bibliographically oriented programs and services, for which technical services form only the infrastructure. This removal of production work from librarians is analogous to the removal or reduction of manufacturing work in industry and represents a kind of in-house move to an information economy.[29]

Altered Staffing Patterns

In the 1985–95 decade we may expect to see:

- Fewer catalogers; possibly none in junior, community, and small colleges, as out-of-the-ordinary cataloging will be done by contract with regional or subject centers where clients' materials will be cataloged from electronically transmitted facsimile copies. Even the bulk of a university library's cataloging may be bought from a contractor or consortium, such as the Research Libraries Group.

- Fewer clerks, as more academic library routines, e.g., circulation and acquisition, under continuing fiscal pressures, fall into a few well-defined, nationwide standard systems implemented with vendors' standard software packages, i.e., turnkey systems.
- Reduced interlibrary loan staff as commercial document delivery systems, e.g., University Microfilms' UMI Article Clearinghouse, gain popularity and deliver materials directly to the user.
- Shift of some librarians to the computer center, or combined library/computer center, for work on information systems design.

The broad and general removal of production/manufacturing work from academic librarians is the most important change and the most valuable opportunity now before the ACRL community. All production aspects of ordering, receiving, checking in, and cataloging should be offloaded to support staff, with a few librarians (or very senior support staff) to manage those operations. The effectiveness of such off-loading will depend on how successfully academic librarians (especially those in positions of leadership) adopt national bibliographic standards and accept contributed cataloging with little or no change. If electronic publishing expands as forecast, it may be possible to realize some further net reduction in production/manufacturing work throughout the library, and a dramatic shift in staffing. (This does not mean any net reduction in total library staffing, but rather a reallocation of existing human resources.)

Changing Attitudes and Policies toward Standards and Their Economic Impact

Despite much pious talk, standards have been more ignored than observed by academic librarians. Historically, the greatest breaches of standards have occurred in cataloging, the most expensive service in medium-sized and large academic libraries. Pleading with library administrators to bring an end to expensive and continuing upheaval, Avram (1983) has enumerated some of the more egregious examples and consequences of lack of standardization. Academic libraries can no longer afford the severe financial penalties imposed by failure to observe standards. In the 1985–95 decade financial pressures will likely force directors and other managers to affirm that it is better to have records that are uniform and cheap, even if imperfect, for they will be aiming to reinvest/reallocate resources into new information systems that will supersede older style bibliographic control systems. In the 1985–95 decade, standardization, always a matter of economic necessity, will likely become universally acknowledged as a keystone of effective library administration.

ACRL can play a significant advocacy role in the drive for the further development and implementation of standards in the field. The role of standards also ought to be emphasized heavily in the curricula of graduate programs of education for library and information science. Using workshops and institutes offered by appropriate organizations, e.g., the National Information Standards Organization (Z39), and the various standards committees of other ALA divisions (and related nonlibrary organizations, e.g., AFIPS), ACRL can help educate and reeducate library managers to the vital role of standards in the library economy.

National library leaders will continue to stress the economic advantages of standards. Indeed, it may be expected that administrators, pressed hard by continuing budget cuts, will soon view strict adherence to standards as an important fiscal control device. It is they, not the technical staff, who must control the costly programs for revising AACR, MARC, and LSH. Here is what Avram told directors of the Association of Research Libraries (ARL) at the fall 1983 ARL meeting:

> There has been an occasional voice in favor of AACR3. A larger group is calling for a complete overhaul of LC subject headings. LC is willing to consider making changes that are possible within the general framework—and we are currently working to this end. But any major revision of any of these standards would impact the entire library community, nationally and internationally, and would cost countless millions of dollars. What would become of the millions of records we already have in machine-readable form?"[30]

With the return of decentralized local processing—now possible through cheap, distributed computing—there is some risk that the era of individually tailored cataloging might return. Demands for new library services and competitive challenges (for money) from other academic programs in colleges and universities ought to act as a brake on this temptation. It would be a tragedy if the decades of progress in bibliographic standardization were to be undone by unrestrained local modification of nationally distributed cataloging copy.

Changing Attitude toward Management of Institutional Resources

Collection development librarians were the first to be keenly aware that their work resulted in cash outflow other than their own salaries: they have long been held strictly accountable for book budgets. Yet in other areas librarians have hardly been held to financial accountability and the rather antiquated view that resources are obtained by turning a tap remains embarrassingly prevalent. In the 1985–95 decade it may be expected that all academic librarians will receive resource budgets managed by a master-fund accounting system; librarians' budgets will be updated daily and reports presented on their microcomputers as well as on microcomputer displays observed by higher management levels. All academic librarians will be held accountable for the effective, economical use of their assigned resources. For all computer-based systems, resource consumption will be tracked on a transaction basis for all employees (including support staff and student employees); tracking will include librarians' access to bibliographic utilities or other networks, and interlibrarian and interinstitutional electronic mail. The effectiveness of librarians' resource management will be reviewed as part of their performance appraisal.

Managers' Software

Specialized management software is currently being marketed for high-level executives in business and industry. This software enables executives to obtain management information directly instead of (1) relying on hit-or-miss reporting by staff officers in the organization or (2) reading batch printouts with data too old for valid decision making. Using such software, tomorrow's library managers will most likely obtain the data required for rapid decision making and long-range planning directly from a console. Certainly the academic library's top administrators will have such software.

Role for Robots and Artificial Intelligence?

Friday, April 13, 1984, marked the opening of the First International Personal Robot Congress, held at Albuquerque, New Mexico. The conference, endorsed by the British Robot Society, the Robot Institute of America, and the Robotics Society of America, included educational applications. Are there potential library applications? Supposing the videodisk, satellite transmission, and wireless lap computers do become the keys to the library of the future?[31] What of the past? Must the management of our retrospective collections forever remain labor-intensive work unrelieved by mechanical assistance? ACRL and LITA might collaborate to encourage the development of robotic devices for stack management and for the efficient, rapid conversion of selected inkprint collections to digital form.

Regarding artificial intelligence (AI) and the development of expert systems, Clarke and Cronin (1983) report a disturbing lack of interest in library applications. Feigenbaum (1983) devoted a few pages of his book, *The Fifth Generation*, to the concept of an "intelligent library," and proposed the establishment of a National Center for Knowledge Technology.[32] Yet two things are evident from Feigenbaum's book: (1) the construction of expert systems requires an inordinately high investment of time by some very expensive people, and (2) the systems function best with problems of a deterministic character.

Now, the fluidity and flexibility of human learning and the responsiveness characteristic of librarian-user interaction are precisely the strengths of natural intelligence, the librarian's most vital ability. Not everyone thinks the computer can match the human brain's remarkable creative powers. Hofstadter essentially dismisses the idea that intelligence can be mechanized or arise from inert, inanimate devices.[33] Although AI remains a developing and controversial field, within the ten-year span of this report academic librarians need not fear that their duties will suddenly be taken over by some HAL-like computer. But since the strength of AI in its current state lies in dealing with events of very high predictability, AI might be a potent tool in area where we try to impose algorithms, e.g, AACR. The successful development of expert systems to cope with cataloging codes could have an attractive payoff if still more cataloging could be delegated to support staff.

With the possible exception of the LITA Ad Hoc Committee on Emerging Technologies, there appears to be no ALA unit specifically addressing the potential of AI. ACRL ought to post a systematic watch on AI, in collaboration with LITA, ASIS, and other appropriate organizations.

Broadened Bibliographic Access

Wide access to computerized bibliographic data and full text have the capacity to exercise a powerful leveling effect in academe. Computerized information systems, especially those services marketed directly by commercial vendors to the end users, may "demystify" arcane aspects of bibliographic and information retrieval. Specialist faculty, graduate students and teaching assistants, and academic librarians in the elite institutions may no longer constitute a premier, invisible academy of gatekeepers or pioneers at the frontiers of knowledge and research. Possibly electronic information systems can democratize aspects of research, bringing opportunity to the academic stars of lesser galaxies. But without ready cash for entry and access this opportunity can not be realized.

Online and Offline Reference Works

Lancaster (1982) forecasts that by 1990 "25 percent of existing reference books will only be available in electronic form. The 50 percent level will only occur after 2000." Some of the electronic versions may be sold outright just as their inkprint versions are; others may be licensed or require access fees for consultation. Online reference works will certainly be of great value to science and technology but cannot be supposed to satisfy an undergraduate's enormous appetite and weak budget. It should not be supposed that existing inkprint reference works will be rendered obsolete at any level of instruction and research, even by 1995. Many physical constants published in tables and handbooks do not change; books like *Who Was Who* and the major retrospective encyclopedias in the arts and the humanities will most certainly endure. Gale Research Company, a major publisher of inkprint reference works "doesn't foresee databases replacing reference books as a library research tool."[34]

An Educator's Model of the Future

Not everyone concurs with Gale Research Company's conservative views. The compact disk, which has already revolutionized the sound recording, is sure to have an impact on scholarship. Portions of the MARC database are already available on a compact digital disk. It is not beyond imagination to suggest that at least some reference works may be available in this new format within the next decade, a development that might offer relatively cheap offline access. Samuel L. Dunn, speaking before a 1983 meeting of the World Future Society, suggested that new technologies would permit the future university to combine a medieval style of individualized tutoring with instructional delivery via electronics. Here is how students will interact with the library according to Dunn's forecast:

> Most students in tomorrow's university will have their own personal computers and will be able to access information banks with ease and skill. The personal computers will be linked to university-wide networks that will allow students to call up most library materials and view them from their dormitory rooms or homes.[35]

The realization of such a forecast is beset with enormous social, technical, and financial problems—the implications of copyright and user fees alone are staggering. The traditional structures and curricula of colleges and universities would need to be revolutionized and higher education is not notable for implementing revolutions. The forecast presupposes the existence of vast new infrastructures for financing, organizing, distributing, presenting, and maintaining huge data banks dynamically. It must also be presupposed that a good deal of retrospective material will already have been digitized. But Dunn does not consider how that effort might be financed, let alone accomplished on the technical side. Over the past half century the library community has lived through earlier visionary proposals where economic, technical, and ergonomic problems had not been thought through by enthusiasts, e.g., microforms, and most especially the ultrafiche.[36]

Numerous obstacles stand in the way of realizing Dunn's future soon. They include: (1) decreasing financial support for education, (2) uncompleted research work essential for the development of new access systems for huge, dynamic files, and (3) the difficulties inherent in the social engineering necessary to alter the structure of the academic world. It is safe to say that his futuristic environment will not be created within the ten-year period encompassed by the present report. Even Dunn, in his forecast, suggests that it may take ten to twenty years to transform the university's curriculum from its three hundred years of discipline-centered traditions into something new. It has taken nearly fifteen years of laborious and difficult work to bring bibliographic networks and utilities to the point where they can deliver citations effectively, and that same amount of time before the widespread acceptance of the long-promoted idea that online public access catalogs would supersede the card catalog. Even though technology always accelerates in its development and time occasionally seems to telescope backwards, the delivery of full text is a problem that is one or two orders of magnitude more complex than the delivery of citations, and systems to accomplish it will not evolve overnight. Nor will faculty and librarians develop an overnight readiness either to work with such systems or to accept new structures in place of those that have developed over centuries. It will probably take at least one generation to get the process started—until those children now growing up with microcomputers reach academic maturity.

Materials Delivery

A recent summary of a CLR-commissioned report on document delivery contains some disturbing items:

- rapid turnaround "does not appear to be a high priority concern of the library profession as a whole, but rather of a limited number of concerned librarians who are assessing the future of libraries";
- there is "no significant shift away from present delivery patterns";
- "electronic technologies do not as yet play a major role in document delivery";
- none of the libraries investigated had studied document delivery time, but rather had "done an excellent job of convincing users to wait."[37]

This same issue of *Information Hotline* also reports that one in six U.S. households now uses microcomputers or has access to one at work or school. This figure may be exaggerated right now, but in a year or two one might expect an even lower ratio.

Easy access to microcomputers along with ACRL's commitment to "encourage innovation in academic and research library services" combine to justify probing this alleged lack of interest in rapid delivery. Long delay in consulting distant materials not only stifles research, but also weakens bibliographic instruction programs and damages related efforts to raise the quality of library service. The coming impact of electronic document ordering systems has already been mentioned. Although Aveney has suggested that "the disposable book [one that is printed on demand, at home or in the office] promises to cause the most significant changes in library organization," that possibility is not immediate and cannot be given serious consideration at this time.[38]

Computer Center/Library Relationship

Those who have criticized library

schools for adding the word "information" to their names may not have noticed the campus computer centers transforming themselves into the campus "information processing centers." It is now commonplace in a number of academic institutions for one officer to be responsible for all types of information services and facilities; the oldest and most notable instance is Columbia University where the library director has the title vice president for Library and Information Services.

Libraries and computer centers have long been in competition for the same dollars. Technology has advanced to the point where it is obvious that the two agencies represent different faces of the same coin. The library and its inkprint system have no monopoly on recorded knowledge; and given the libraries' huge and varied national bibliographic utilities and consortia, the computer center has no monopoly on CPU cycles. The challenge is to get them together and put an end to the bitter political battles that are waged for limited funds. An unfortunate result of this infighting is that it can pit scientists and humanists against each other, further polarizing the "two cultures."

Bringing the two major information forces together on one campus is no easy task: the head of a computer center is sometimes excessively hardware-focused, while the chief librarian is overly beset with problems of personnel, budget, and the always unreasonable demands of students and faculty for more materials, more hours, more study space. The ACRL community cannot take the risk that the two major information forces in academe might forever diverge. Indeed, the convergent character of the new communication, recording, storage, access, and retrieval technologies themselves ought to be exploited to meld these two complementary interests. Here is a good opportunity to halt Thompson's "end of libraries"—a union of the major information processing forces on campus can forge a combined institution capable of services neither could hope to provide effectively on its own.

D. Kaye Gapen, director of libraries at the University of Wisconsin, speaking at the Third ACRL National Conference, called for librarians to "have the closest possible relationships with their computer centers."[39] This excellent suggestion might be extended even further: if wasteful and destructive rivalry is not to occur, there must be administrative liaison at the highest levels. Academic officers responsible for instruction and research need to appreciate the fundamental unity of interest among these two complementary powers that, other than faculty themselves, must be among the most potent forces in any educational institution.

Though one sees an occasional report or article in the literature, there is very little to suggest that this bringing together is being addressed at the right levels and on the necessary scale. This is an opportunity for ACRL to establish linkages with appropriate organizations, such as the Association of American Universities (AAU), the National Association of College and University Business Officers (NACUBO), and similar associations representing the chief academic officers, computer center directors, and the planning officers of colleges and universities. There will be overlap here—and opportunity for additional collaboration—with similar efforts undertaken by the Association of Research Libraries.

The Durable Library

As indicated earlier in this paper, whatever the technical advances, some kind of institution will be needed to support the academic world, regardless of the form in which information is recorded and distributed. No one professor, scholar, researcher, student, or librarian can possibly have at his or her command the entire universe of recorded knowledge; unlimited access could not be afforded with conventional methods and materials and, *a fortiori*, cannot be provided with new media. Technology may be able to give students and faculty members ever more powerful microcomputers, devices that come close to "mainframes"—but such devices cannot give to students and faculty what is known as the academic library. No for-profit organization can be counted upon to support the full range of materials essential for instruction and research.

Over the millennia the library has already experienced generations of changing media and has survived as an essential social institution. By whatever name it is designated, that institution, that infrastructure, will still be a library. And that infrastructure will still need librarians as intermediaries, teachers, consultants, advisers, and interpreters. As a matter of fact, the development of the so-called electronic library in higher education will impose even greater demands on academic librarians for, the less visible the medium, the greater the need for the intermediary. It is this message that ACRL should communicate to the academic world, especially to academic planning officers.

REFERENCES AND NOTES

1. Using the 1983/84 *ALA Handbook of Organization*, the author informally surveyed thirty-five key ACRL leaders in the U.S. and Canada to obtain their views on many of the topics covered in this paper.
2. Blaise Cronin, "Adaption, Extinction or Genetic Drift?" *ASLIB Proceedings* 35:278–89 (June/July 1983), p.279.
3. For excellent presentations distinguishing the sometimes confounded terms *information, data,* and *knowledge,* see Abraham Kaplan, "The Age of the Symbol—A Philosophy of Library Education," *Library Quarterly* 34:295–304 (Oct. 1964), and Joseph Z. Nitecki, "Old Ghost in a New Body: Some Misconceptions about Information-Knowledge Relations and the Role of Computers in Academic Libraries," *Research Strategies* 1:148–54 (Fall 1983).
4. The business community does not labor under this difficulty; there is a National Secretaries' Week, and business people don't confuse office equipment or hardware with the personnel who make the office function.
5. The American Council of Learned Societies currently has a membership of forty-three organizations, chiefly in the arts and humanities.
6. In the UK, the Standing Conference of National and University Libraries (SCONUL) has developed programs of bibliographic instruction for use in British academic libraries; some ACRL liaison with SCONUL may be appropriate.
7. Shirley Havens, "Academic Libraries: Myths and Realities," *Library Journal* 109:1419 ff. (Aug. 1984).
8. Millicent Abell and Jacqueline M. Coolman, "Professionalism and Productivity: Keys to the Future of Academic Library and Information Services," in *Priorities for Academic Libraries,* eds. Thomas Galvin and Beverly Lynch (San Francisco: Jossey-Bass, 1982), p.71–87. See esp. p.86.
9. Patricia Battin, "The Library: Center of the Restructured University," *College & Research Libraries* 45:170–76 (May 1984).
10. In academic institutions service pins and certificates are clearly not workable and, in fact, can be counterproductive; both professional and classified employees often find such "awards" insulting and condescending, perceiving them as military, industrial, or pro forma in character.
11. James D. Koerner, *The Present and the Future in Educational Technology* (An occasional paper from the Alfred P. Sloan Foundation, New York, 1977) See esp. p.31.
12. Mark R. Yerburgh, "Some Unguarded Thoughts on Academic Librarianship: Vision vs Reality," *CLIC Quarterly* 2:11–19 (Dec. 1983). See esp. p.13.
13. Maurice B. Line cites as examples librarians "who say proudly, 'I am a cataloger' or 'I am an accessioner,' as if they were some special blood-group which was incompatible with others." (See p.156 of Maurice B. Line, "The Functions of the University Library," in *University and Research Library Studies,* ed. W. L. Saunders, Oxford: Pergamon, 1968), p.148–58.
14. Thomas G. English, "Librarian Status in Eighty-nine U.S. Academic Institutions of the Association of Research Libraries, 1982," *College & Research Libraries* 44:199–222 (May 1983). See esp. p.199, 207.
15. ———, "Administrators' Views of Library Personnel Status," *College & Research Libraries* 45:189–95 (May 1984). See esp. p.195.
16. Virgil Massman, *Faculty Status for Librarians* (Metuchen, N.J.: Scarecrow, 1972), See esp. p.43.
17. Whether the "manufacturing" they do is industrial or bibliographic may not matter; if librarians' activity is *perceived* as having a manufacturing, custodial, or maintenance aspect, it probably will

continue to be identified by faculty with low-status "housekeeping." In this sense, one can agree with advertising executives who claim that truth is irrelevant, that "perception is fact."

18. Academic librarians will want to observe carefully the library economics research seminars sponsored by the Council on Library Resources. These studies are currently focusing on the large research library but may ultimately have a bearing on systems of cost allocation for other types of academic libraries.
19. Maurice B. Line, "Some Possible Future Effects of Information Technology," *IFLA Journal* 10:57–62 (1984). See esp. p.58.
20. John F. Stirling, "Technological Developments in Information Transfer: Some Implications for Academic Libraries," *Journal of Librarianship* 14:235–46 (Oct. 1982). See esp. p.244–45.
21. Herbert S. White, "Growing User Information Dependence and Its Impact on the Library and Information Service Fields, *Journal of Library & Information Science* 9:1–18 (Apr. 1983). See esp. p.7.
22. NFAIS Press Release, Aug. 1984.
23. James Thompson, *The End of Libraries* (London: Bingley, 1982).
24. Maurice B. Line, "Ignoring the User: How, When, and Why," in *The Nationwide Provision and Use of Information,* Proceedings of the ASLIB/IIS/LA Joint Conference, Sheffield, 15–19 September 1980 (London: Library Association, 1981); p.80–88.
25. Thompson, *The End of Libraries,* p.26.
26. The new technologies of teletext and videotex have been criticized as potential failures because their promoters have not understood the organizational aspects of information. A cursory examination of books and articles on these systems shows that many of their enthusiasts naively suppose that information is "self-organizing," an assumption that not even the greenest librarian would make.
27. F. Wilfrid Lancaster, "The Future of the Library in an Age of Telecommunications," in *Changing Information Concepts and Technologies* (White Plains, N.Y.: Knowledge Industry, 1982), p.159.
28. S. D. Neil, *Canadian Libraries in 2010* (Vancouver, B.C.: Parabola, 1980), p.32.
29. Maurice J. Freedman is unwilling to bury technical services; he believes the future of automated technical services is a "rosy one." See Maurice J. Freedman, "Automation and the Future of Technical Services," *Library Journal* 109:1197–1203 (June 15, 1984).
30. Henriette D. Avram, "Barriers: Facing the Problems" (Prepared for the Association of Research Libraries Program on Bibliographic Control, Chapel Hill, N.C., Oct. 20, 1983. Typescript), p.6.
31. Motorola now produces a wireless terminal that fits into a briefcase—possibly a forerunner of a portable search terminal that students and faculty can use in the stacks, or anywhere (via cellular radio networks), to consult current and retrospective bibliographic files.
32. Edward A. Feigenbaum and Pamela McCorduck, *The Fifth Generation: Artificial Intelligence and Japan's Computer Challenge to the World* (Reading, Mass.: Addison-Wesley, 1983), p.88–89, 227–29.
33. Douglas R. Hofstadter, "Artificial Intelligence: Subcognition as Computation," in *The Study of Information: Interdisciplinary Messages,* editors Fritz Machlup and Una Mansfield, (New York: Wiley, 1983), p.271.
34. Ann Brewer, "Book or Data Bases in the 21st Century?" in *Information and Special Libraries in 2009: Informed Speculations,* eds. Judy Genesen and David E. King (Chicago: Special Libraries Assn., Illinois Chapter, 1984), see esp. p.4.
35. Samuel L. Dunn, "The Changing University: Survival in the Information Society," *The Futurist* 17:55–60 (Aug. 1983).
36. For an excellent analysis of how the several ultrafiche programs went awry, see Mark Yerburgh and Rhoda Yerburgh, "Where Have All the Ultras Gone? The Rise and Demise of the Ultrafiche Library Collection, 1968–1973," *Microform Review* 13:254–61 (Fall 1984).
37. "How Libraries Obtain Materials for Their Users," *Information Hotline* 15:1, 17 (Apr. 1984).
38. Brian Aveney, "Electronic Publishing and Library Technical Services," *Library Resources & Technical Services* 28:68–75 (Jan./Mar. 1984), p.71.
39. D. Kaye Gapen, "Myths and Realities: University Libraries," in *Academic Libraries, Myths and Realities* (Proceedings of the Third National Conference of the ACRL, Chicago, 1984). See esp. p.9.

Collection Development at the Center for Research Libraries: Policy and Practice

Sarah E. Thomas

One of the goals of the Center for Research Libraries' (CRL) collection development policy is the acquisition of materials not widely held by research libraries in North America. Despite the goal, this study finds that a significant number of serials currently received by CRL are also held by twenty or more libraries, as indicated by holding symbols on OCLC and RLIN. Both CRL and its members stand to realize substantial savings through a cooperative policy of cancellation of duplicate holdings.

In recent months the mission and goals of the Center for Research Libraries (CRL) have been the subject of considerable debate. The *Journal of Academic Librarianship*, in its November 1983 issue, published varying perspectives on the Center as expressed by several leading professionals in the field. One of the topics of prime concern was its collection development policy. Should the Center collect comprehensively in some areas or selectively in many? Should CRL assume the role of the National Periodicals Center? Many of the Center's members were particularly interested in its journal holdings for purposes of document delivery; others felt their membership assessments should not subsidize this activity.

CRL's journals collection has evolved out of its programs and some special projects. A National Science Foundation grant enabled CRL to add subscriptions to journals indexed in *Chemical Abstracts* and *Biological Abstracts* that were infrequently held in North American libraries. Foreign titles from the P.L. 480 programs make up a substantial portion of the collection. During the economic woes of the early 1970s, funds from the Carnegie Corporation supported the acquisition of titles at CRL that members were forced to cancel locally.[1] The collection development and document delivery functions at CRL were linked together through the Journals Access Service, established by CRL membership in 1975.

In November 1983, CRL issued a policy discussion document that detailed its collection development policy. The document describes the Center's commitment to collecting certain types of material and certain subjects. For example, an effort was made to acquire ethnic newspapers issued in the United States as well as microfilm editions of domestic, general-circulation newspapers. Microfilm editions of selected foreign newspapers,

---

Sarah E. Thomas is chief in the technical services division of the National Agricultural Library, Beltsville, Maryland 20705. *The research supporting this paper grew out of a preliminary investigation conducted while the author was a Council on Library Resources academic library management intern at the University of Georgia Libraries during 1983–84. A Council on Library Resources officers' grant funded a revised version of the study. I am indebted to the Council for its support. In addition, David Bishop, Director, University of Georgia Libraries, provided the initiative for the research, as well as material and technical assistance. Thanks are also owed to Jim Scanlon, department manager, Office of Computing Activities, University of Georgia, for producing—from CRL's archives tapes—the lists of titles in each language that formed the basis of the study. Finally, I am grateful to the Research Libraries Group for their support in providing access to the RLIN database.*

primarily those covered by the P.L. 480 program, are also collected. In a general policy statement about periodicals, the document specifies that "The Center maintains subscriptions to all periodical titles that have been ordered under special programs and projects approved by the Council. Special emphasis is upon foreign titles in the fields of science and technology, and upon titles from South and Southeast Asia acquired through the Library of Congress' [*sic*] cooperative acquisitions programs for those areas."[2] In addition, new subscriptions were entered in 1983 for "foreign titles that have been frequently requested through the Center's Journal Access Service and are not widely held in North America."[3]

Two principal guidelines characterize the Center's collection development policy with regard to serials. The first is to acquire materials relating to a specific subject or specific world area. Concentration on particular subjects enables the Center to assume collecting responsibility in these areas, thus providing its membership with centralized access to them, and allowing members to dispense with their own subscriptions if desired. A second, recurring theme in the document is that material acquired by the Center should supplement, rather than duplicate, major collections in the nation. These two criteria can operate in conflict; that is, periodical materials purchased in support of a particular program may duplicate holdings in other North American libraries, but in general, CRL's serial holdings have been viewed as complementing those of its members.

This paper explores the extent to which CRL's serial holdings are unique. If, as many Center members feel, the most effective use of the Center can be made if it serves as repository for and collector of unique items, there should be little overlap between the Center's holdings and those of other libraries. Acquisition and processing of a serial title by the Center can save many libraries subscription and processing costs, providing all CRL members the benefit of access to the title, while shaving expenditures for individual libraries. A few large research libraries may choose to duplicate certain titles held by the Center on a selective basis, but the general premise that CRL's serial holdings should be complementary to, but distinct from, those of its membership should remain valid.

METHODOLOGY

CRL holds an estimated 50,000 current and retrospective serial titles.[4] Approximately 13,500 are currently received.[5] By spring 1984, 15,389 serials had been cataloged in machine-readable form. This study concentrates primarily on those titles available in machine-readable form and coded as currently received by CRL. Just under half, or 48.46 percent of these 15,389 serial titles, are estimated to fall in this category.

In a study conducted at the University of Georgia in June 1984, various subsets of the Center's cataloged serial holdings were surveyed to determine the number of locations that reported holding the same title as cataloged by the Center. Records in five languages—English, German, Japanese, Russian, and Urdu—were searched in the OCLC and RLIN databases. These languages represent four major linguistic areas in which the Center collects materials. In addition, with the exception of Urdu, they represent four of the five most widely-held languages in the Center's journal collection. Combined, they comprise almost two-thirds of the Center's 15,389 cataloged serials in machine-readable form.

OCLC and RLIN were selected as the online catalogs serving as de facto equivalents of the *National Union Catalog*. Although printed sources such as the *National Union Catalog*, the *Union List of Serials*, and *New Serial Titles* provide location information that is not always available online, particularly for retrospective titles, the researcher viewed OCLC and RLIN as prime sources of information for those seeking a location for a title not found in their own library. Because most major research institutions are now affiliated with a network providing access to online bibliographic data, almost all current periodical titles and a substantial number of retrospective titles are now available online. Also, the large OCLC and RLIN databases provide facile access to material, reducing the need to rely on tedious, cumbersome manual searching of published sources. Of course, details of holdings may not be identical in all libraries. Until a format for representing detailed holdings is implemented nationwide, and until all libraries have input this information, the exact amount of duplication of serial holdings cannot be known with certainty.

English, German, Japanese, Russian, and Urdu serial titles comprise 10,802 records entered into the OCLC database by CRL. Using Blackwell North America software, computer-center staff at the University of Georgia produced a list for each language, arranged in descending order by OCLC number. Approximately 10 percent of the records in each language, or a total of 1,069 titles, were selected to be searched on OCLC and RLIN. For each periodical title searched, the number of locations holding the title was noted. Because of tape loading of records from those libraries that have been members of both networks, there was some slight overlap between the two databases. However, the duplication did not significantly affect the results, because the data collected was divided into ranges of numbers broad enough to negate any redundancy.

No attempt was made to determine whether or not holding libraries were CRL members. In addition, the searcher recorded the publication status of the item being searched. Publication status was either "current," for titles still being issued at the time CRL cataloged the title on OCLC, or "other," including "dead" serials no longer published, serials for which publication had been suspended, and serials with an unknown publication status. This study focused principally on currently received serials, of which the sample contained 518 titles.

RESULTS

The results varied considerably according to the language of the piece. Among the current Urdu language titles, for example, 70.59 percent were held exclusively by the Center (See table 1). Of the Japanese titles searched, almost 43 per-

TABLE 1

CENTER FOR RESEARCH LIBRARIES—LOCATION DISTRIBUTION CURRENTLY RECEIVED SERIALS AND NEWSPAPERS

	1		2-5		6-10		11-15		16-20		21-50		51-100		101-200		201-1000		TOTAL
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
English	56	15.26	73	19.89	56	15.26	28	7.63	16	4.36	51	13.90	52	14.17	17	n4.63	18	4.90	367
German	2	6.06	14	42.42	5	15.15	3	9.09	4	12.12	2	6.06	2	6.06	1	3.03			33
Japanese	17	42.50	13	32.50	6	15.00	2	5.00	2	5.00									40
Russian	8	18.18	13	29.25	10	22.73	4	9.09	6	13.64	3	6.82							44
Urdu	24	70.59	10	29.41															34
All languages	107	20.66	123	23.75	77	14.86	37	7.14	28	5.40	56	10.81	54	10.42	18	3.47	18	3.47	518

cent listed CRL as the sole location. Approximately 20 percent of the Russian periodicals were unique to CRL, while about 16 percent of the English titles were attributed to the Center only. The lowest percentage of current titles was for German language materials, with 6.06 percent uniquely held. According to this sample, 20.66 percent of titles held by CRL in these five languages were unique to CRL.

A slightly greater percentage, 23.75 percent of all current titles sampled, were found to be held by two to five libraries in North America, including CRL. For German-language periodicals, 42.42 percent fell into this category. English-language serials represented the lowest percentage of uncommon serials, with 19.89 percent listing more than one but fewer than six locations. Once again, the least amount of duplication among North American libraries was noted in foreign language publications.

Fewer titles had six to ten locations. CRL shared around 15 percent of its current cataloged serial holdings with five to nine other libraries. Most of these titles were in English. Of the Center's cataloged periodicals, 7.14 percent listed more than ten and up to twenty locations. Altogether, an estimated two-thirds of the Center's current periodicals collection was held by fewer than twenty libraries. The remaining third had been cataloged by from 21 to 998 libraries, with the relative amount of duplication dropping off sharply after fifty locations. For example, slightly fewer than 3.5 percent of the current titles were held by more than two hundred libraries.

The results of this study indicate that, for the most part, CRL is adhering to its collection development policy of limiting its subscriptions primarily to periodical literature not widely held in North America. If one accepts a definition of "rarely held" as being five or fewer libraries, an estimated 44.41 percent of the Center's serials meet this criterion. If this definition is expanded to include fifteen or fewer locations, almost two-thirds of the current titles sampled fit this description. Excluding English-language materials, over 86 percent of the titles have been cataloged on OCLC or RLIN by fifteen or fewer libraries.

However, particularly in the area of English-language periodicals, some conflict with the Center's collection development policy is apparent. Over 35 percent of current English serials, cataloged by the Center on OCLC, are listed as being located at from 21 to several hundred institutions. While several popular titles are for professional magazines to which every research library would subscribe, such as *American Libraries, Library Trends,* or *Information Technology and Libraries,* many others are not. For example, in 1982 the Center initiated a subscription for the *Journal of Divorce,* a quarterly that over 150 other institutions hold. No doubt in accordance with its policy of collecting publications issued in South and Southeast Asia, the Center holds *Cinema Vision India,* listed as being in 83 other OCLC libraries and found in 12 RLIN libraries. *Geochimica et cosmochimica acta,* published by Pergamon Press at a price of $100 per institutional subscription, is a scientific journal that falls within the scope of CRL's collection in terms of subject definition but is widely held, with almost 200 libraries claiming ownership on OCLC and RLIN. *Interdisciplinary Topics in Gerontology* (93 libraries); *Byzantine Studies* (69 libraries); *Applied Ergonomics* (91 libraries); and *Family Therapy* (98 libraries) are but a few examples of CRL titles held by multiple institutions. Such titles are now at variance with the Center's 1983 collection development policy of acquiring items rarely found in North American libraries and are evidence of the conflict between its role as document deliverer through its Journal Access Service and its commitment to develop its collection in particular subject areas. CRL's Journal Access Service (JAS), initiated in 1975, brought it into the journal supply business, with some members perceiving document delivery as a prime attraction. Other members make little use of JAS and are not certain whether the best use of their membership assessments is in the support of this program.[6] They view CRL's chief value in terms of its overall collection and the unique materials it preserves in a centralized location.[7]

It is precisely this gray area of widely held serials that points up CRL's dilemma. If resources were unlimited, it is possible the acquisition of more commonly held journals would pass unquestioned, and the Center could quietly develop into a centralized facility with many of the attributes of the proposed National Periodicals Center. However, because many libraries continue to operate in a period of economic retrenchment, they have examined all their commitments with care. An outgrowth of this scrutiny has been a reevaluation of the Center's goals. Two steps to resolve the dilemma, each of which would strengthen the Center's role in the research library community, present themselves. First, the Center could cancel subscriptions for most serials held by over twenty libraries. Secondly, CRL members could review subscriptions to infrequently used periodicals to determine if it might not be preferable, from a cost standpoint, to rely on the Center for these titles, rather than to maintain them locally.

Evidence suggests that over 28 percent of titles currently received and cataloged by CRL, using OCLC, are held by twenty or more libraries. If even half of these could be eliminated, the Center could reduce current periodicals subscriptions by over 1,000. Applying the average cost of a domestic serial as \$78.04,[8] a savings of as much as \$78,040 could be attained. This represents approximately 29 percent of the 1984 budget for serials,[9] assuming that duplicate journals were paid subscriptions, and not received as gifts or exchanges.

The second step is for CRL members to cut subscriptions locally. Many members perceive the Center's greatest benefit to them in terms of cost-avoidance. When the Center purchases titles, libraries can obtain journal issues through CRL, rather than resorting to the costly measure of acquiring, processing, and shelving infrequently used material locally. Libraries cooperating with CRL in a collection development effort should look to reducing their holdings of serials rarely used at their own institutions. These might be foreign-language materials or even English-language periodicals on specialized subjects that are not central to the institutions' teaching and research areas. In 1984, CRL had over 140 full members. If each of these institutions found that it could eliminate 50 periodical subscriptions from its orders, each would reduce its expenditures for serials by approximately \$4,000.[10] Eliminating the cost of processing, storage, and binding would double the savings.

As a case in point, this study also examined the overlap of the University of Georgia Libraries' collection with that of CRL. Searching 1,069 titles on OCLC, the investigation found 98, or 9.17 percent, titles were also held by the University of Georgia. Most of these titles were in English. Not all retrospective titles held by the university libraries are listed in OCLC. Comparing titles no longer published with entries in the Georgia libraries' serials catalog suggests that an additional 10 percent of "dead" periodicals may be duplicated in the Center's collection. Because the university libraries have converted almost all their currently received serials to machine-readable form using OCLC, the most accurate comparison of overlap is between the libraries' current titles and current titles at CRL. Overall, 16.03 percent of the current CRL serial titles searched were also held by the university libraries. Over 20 percent of the currently cataloged English-language titles were duplicates. A study of German-language duplicates at the University of Georgia, conducted by the author in March 1984, indicated that approximately 23 percent were candidates for elimination. If only 10 percent of the serial titles also owned by CRL were canceled, the Georgia libraries could save \$5,429.12 in materials expenditures. Sixty-eight titles, which cost an average \$79.64 each, could be cut.[11] Perhaps an additional \$5,000 in processing, binding, and shelving costs could be realized. The figure above represents approximately half of Georgia's membership assessment by CRL.

It is assumed that other institutions would reap similar benefits, although local studies would need to be conducted to test this assumption. The fact remains, however, that one of the fundamental principles underlying CRL's existence is that of shared collection development. In the past, CRL's well-being has been troubled by splintered collection development policies that fragmented its resources and clouded its image in the library community. Endeavoring to meet the varying needs of its membership, the Center spread its purchases widely, falling prey to the pitfall of trying to be all things to all people. CRL's strength lies in its ability to collect materials in specialized subjects or world areas that are not commonly held by its members.

Recognizing that its identity and rôle among libraries requires clarification, the Center has invited discussion on the nature of its periodical holdings and its collection development policy in this area. *Focus on the Center for Research Libraries* recently announced that "For many years the Center's Council has expressed the opinion that CRL could serve the membership by expanding its periodical holdings—relieving members of an increasing financial burden. Agreement has been reached that in the future CRL's periodical collection should focus on titles published outside of the United States, the United Kingdom, and Canada; and that titles be held by a limited number of North American libraries."[12]

CONCLUSION

Only through a well-defined, consistent collection development policy and the cooperative efforts of its membership can CRL fulfill its mission "to strengthen the library and information resources for research in North America and to enhance the availability to those resources."[13] To achieve this end, the Center needs to reduce the extent of overlap from its collection to the holdings of its members and to concentrate on those items that complement its members' collections. For the Center to succeed in its efforts, however, its members must support policy decisions that have occurred through consensus. In addition, they must use the Center more effectively, relying on its centralized facilities and collections in lieu of offering direct, local access to infrequently used titles. Furthermore, they must publicize the Center's capacity, integrating the record of the Center's holdings with their own collection so that patrons, in effect, regard the Center as an extension of their own institution. When research libraries and the Center work together toward a common goal—sharing development, management, and content of collections—they bring renewed vigor to the nation's libraries and the scholarly community they serve and also fulfill the mission they envision for CRL.

REFERENCES AND NOTES

1. Donald B. Simpson, "Center for Research Libraries: Meeting the Opportunity to Fulfill the Promise: a Symposium," *Journal of Academic Librarianship* 9:258–69 (Nov. 1983).
2. "The Center for Research Libraries: Collection Development Policy," Chicago: Center for Research Libraries, 1983, p.14.
3. Ibid.
4. "HEA Title II-C Grant Awarded for Records Conversion," *Focus on the Center for Research Libraries* 4:1 (May-June 1984).
5. "The Center for Research Libraries: Collection Development Policy," p.16.
6. Simpson, "Center for Research Libraries," p.259.
7. Ibid.
8. *The Bowker Annual of Library and Book Trade Information*. 29th ed., India Ehresman, comp. and ed. (New York: Bowker, 1984), p.392.
9. "The Center of Research Libraries: Collection Development Policy," p.16.
10. The University of Georgia has recently calculated that its average cost for domestic and foreign periodicals is $79.64 per title. This figure was applied for purposes of estimation.
11. Ibid.
12. "Current Discussion Issues Related to CRL Program." *Focus on the Center for Research Libraries*, 4:2 (May-June 1984).
13. Simpson, "Center for Research Libraries," p.261.

Measuring Levels of Work in Academic Libraries: A Time Based Approach

Donald P. Gould

Librarianship has failed to resolve the issue of the differentiation between professional and nonprofessional work or to analyze what constitutes each level of work. Using Stratified Systems Theory, which focuses on the relationship between manager and subordinate in the bureaucratic structure, a study was conducted to measure the level of responsibility in the work of thirty-seven professional and nonprofessional positions in four academic library technical services departments. Three levels of work were measured in "time-spans of discretion" of between two weeks and eighteen months, corresponding to work strata 1 through 3. Results also showed an overlap in levels of responsibility between professional and nonprofessional positions at the Stratum 2 level. In addition, a high correlation was found between level of work measured and what the subordinate felt was a fair rate of pay for the work performed.

During much of its modern history, the library profession has been concerned with questions about what differentiates the various levels of work in libraries, and to what extent librarians can consider themselves professionals. These issues, and the attempt to analyze what constitutes each level of work, have been addressed from several perspectives over the years, with no clear resolution. As far back as 1922, Elizabeth M. Coulter, a reference librarian at the University of California, wrote that proper recognition would come to librarians if, among other things, professional and clerical duties were differentiated.[1]

Mary Lee Bundy and Paul Wasserman summed up the problem of utilization of professionals and nonprofessionals by noting the failure of libraries to analyze systematically their personnel structures and requirements. As a result, many librarians are employed in work that does not "call for their full range of preparation."[2] Lester Asheim called for a thorough revision of job descriptions and job classification schemes "by some new approach in an effort to more fully utilize the particular talents and qualifications of every staff member."[3]

More than a decade and a half have passed since Asheim's statement, but little real progress has been made in analyzing personnel structures. The changes that have taken place have resulted more from the impact of technology and funding cuts than from serious research into the nature of work roles in libraries. The challenge to improve the management and effectiveness of libraries is no less urgent today. Indeed, issues such as comparable worth, collective bargaining, and erosion of financial support make it imperative that library managers seek new solutions.

This article reports the results of a doctoral dissertation. It is the first such study of levels of work in libraries and the first study known to use this particular theoretical approach on a cross-institutional basis. As such, it is necessarily oriented to

Donald P. Gould is a library and information systems consultant, 1125 South Westmoreland Ave. #4A, Los Angeles, California 90006.

methodological concerns as well as the attempt to examine the issue of levels of work in libraries. The intent is to make a contribution to the research base of librarianship and provide an academic research agenda. Just as important is the hope that the results of this, and subsequent studies, will lead to improvements in the practice of librarianship and the management of libraries.

DIFFERENTIATING LEVELS OF LIBRARY WORK

Charles C. Williamson's landmark report in 1923, *Training for Library Service*, used the terms "professional" and "clerical," but pointed out that "the distinction between the two is only vaguely understood and seldom applied in library organization and practice." He went on to castigate library administrators for not clarifying the qualifications needed for different types of work.[4] Two years later George A. Works noted the insufficient distinction made in libraries between clerical and professional types of service.[5] More recently Asheim[6] and Dale E. Shaffer[7] recommended better ways to distinguish between the professional and nonprofessional tasks performed in libraries. Olga B. Bishop further documented the failure to separate professional from nonprofessional duties.[8]

Much of the effort in differentiating professional from nonprofessional work has concentrated on developing position classification and pay plans for compensation purposes and lists of appropriate duties. Beginning with the lists published by the American Library Association in 1927[9] and 1929[10] and the California Library Association in 1932,[11] a succession of plans and lists were issued, culminating in the 1970 *Library Education and Manpower* statement, which recommended "categories of library personnel, and levels of training and education appropriate to the preparation of personnel for these categories."[12] The document was revised in 1976, and the resulting *Library Education and Personnel Utilization* statement is currently considered official policy by ALA.

The ALA statement recognizes three levels of nonprofessional personnel—clerks (high school education), assistants (two years of college), and associates (bachelor's degree)—in addition to the professional positions requiring the master's degree. The statement avoids listing duties appropriate to each level, concentrating instead on a descriptive approach by providing a brief analysis of the "nature of responsibilities" required for the positions.[13]

WORK ANALYSIS IN LIBRARIES

The analysis of work in libraries has concentrated on the *activities* performed, using standard task analysis techniques. This traditional job evaluation approach attempts to provide a means for deriving indexes of relative job values within an organization by various rating schemes. Examples include such studies as the Illinois Library Task Analysis Project,[14] Charlotte Mugnier's study of paraprofessionals in public libraries,[15] and the health sciences library personnel study by Leslie-Beth Rothenburg and others.[16]

Traditional task analysis and job evaluation schemes have several serious drawbacks. For example, the assessments are made by persons, both inside and outside the organization, who are not held accountable for the work of the person or position being analyzed. As will be examined below, the way that work is delegated—the realities of specific accountability and authority—is what sets the level of responsibility in work,[17] not the *activity* in and of itself. It is the *goal* of the activity, the output or result, as judged by the person who is to be held accountable for the work being performed that sets the level of work. The studies cited above have been useful for compiling lists of activities but have yielded little in the way of results that are generalizable, or not institution-specific, and have contributed little to a fundamental understanding of the meaning of levels of responsibility in work. In this paper, the terms *level of work* and *level of responsibility* are interchangeable and refer to the relative position within an organization, with higher-level work being deemed "more responsible."

THE ISSUE OF PAY IN LIBRARY WORK

Although the earlier attempts to differentiate professional from nonprofessional work revolved around position classification and pay plans, there has been a curious lack of research into the issue of pay itself. Those studies that have been done, such as Richard B. Eggleton's in 1978, have focused on pay as one element in the job satisfaction equation[18] and shown it to be a chief source of dissatisfaction among librarians.

It is not surprising that librarianship has avoided such studies when considering the general paucity of substantive social science research on the question of pay.[19] Despite the overwhelming importance of pay as the primary system for reward and compensation in work,[20] modern organizational theorists have tended to view the pay question within the context of generalized psychological theories of motivation or satisfaction.[21]

LIBRARIES AS BUREAUCRACIES

Libraries belong to that class of social organization known as bureaucracies, a type of employment system in which people are hired to produce an output, a result, in return for a wage or salary. About 90 percent of the work force in industrialized countries is employed in bureaucracies ranging from government agencies to schools, factories, small and large businesses, hospitals, etc. Furthermore, these social institutions are organized hierarchically, in which persons within the organization are ranked one above the other. This hierarchy of levels has generally been taken for granted. It is understood that the people at the top of the organization receive significantly higher levels of responsibility, earnings, and status than people at the lower levels.[22]

It might be questioned whether libraries can be considered typical bureaucracies in view of the fact that they employ large numbers of "professionals," but many hierarchically structured organizations employ professionals: hospitals, schools, social service agencies, and even businesses with research divisions. It cannot be successfully argued that libraries are exempt from consideration as bureaucracies simply because of their "unique" staffing patterns. If these staffing patterns are unique, then the role relationships therein need to be studied as they relate to the goals of the bureaucratic organization within which they exist. In fact, several library thinkers have examined this conflict between professional and bureaucratic authority, concluding that the professional function is weak to the point of ineffectiveness.[23,24]

The structure and nature of work in bureaucratic organizations are the direct concern of the theoretical approach developed over the past forty years by Elliott Jaques at Brunel University in Great Britain. Jaques' theory, known as "stratified systems theory," seeks to understand the nature of work and human capability for work within the context of hierarchically structured organizations commonly called bureaucracies. For Jaques, bureaucracies, or what he also refers to as employment hierarchies, are a natural social phenomenon that arose out of society's need to employ people to get work done.

Stratification and managerial control are vital aspects of bureaucratic functioning, and it is the manager-subordinate relationship that constitutes the basic social structure of bureaucratic systems. All work is managerially assigned or sanctioned and contains both prescribed limits of expense, quality and time, to which the subordinate must adhere, and a discretionary aspect.[25]

Jaques' definition of work is vital to an understanding of his theoretical approach: It is the exercise of discretion within prescribed limits of expense, quality, and time. The limits are established, either explicitly or implicitly, by the employing authority (board of directors, trustees, voters, etc.) and are delegated downward through the managerial structure.[26] The exercise of discretion means acting in a climate of uncertainty, making judgments, deciding on alternative means for accomplishing the job. It requires the person to tolerate uncertainty and anxiety about the results of the work. It is the discretionary aspect of work that requires a balance between analysis and intuition in the "continuing process of sensing a potential problem, defining it and constructing a solution.''[27] The longer the period of time that a person must stand up to uncertainty and anxiety, the greater the psychological feeling of the weight of responsibility, and thus the greater the level of work.

For Jaques, all work is goal-oriented. Furthermore, the achievement of the goal must have a realistic, objective time limit, a ''target completion time.''[28] As the period of time between the initiation of a task and its expected completion increases, the path to completion gets longer and more complex and the number of obstacles and amount of information to be gathered and processed increases, as do the number of tasks to be organized and handled.

This discovery led Jaques to develop a measure for determining the level of responsibility in any work role, which he called the ''time-span of discretion.'' Since all work is managerially assigned or sanctioned, the time-span of any role may therefore be objectively measured by getting the manager to determine the longest forward target completion time for any single task assigned to a subordinate. It is the manager, the person who will be held accountable for the work of a subordinate, who determines the time-span, and thus the level of responsibility in any work role. It is the *single longest* period of time for any single task that sets the level of work.

The essence of the time-span of discretion measure is to examine the task content of the work and arrive at accurate, reliable work measures that can be objectively understood by a third party and are both generalizable and not institution-specific. The level of responsibility in a role is *not* dependent upon the number of subordinates, length of training, education, or skill, or any of the myriad factors upon which traditional job evaluation techniques usually rely. Thus, for example, the measure for determining level of responsibility in professional work is the same as for managerial work and provides a basis for comparison of these seemingly different roles. Other factors are also valid concerns, but for purposes of establishing level of work it is the time-span of discretion that is the single, measureable factor.

Much of the early criticism of Jaques' theory revolved around his failure to provide sufficient empirical evidence to support his claims.[29] Hard data continues to be a problem because of the proprietary nature of many of the studies conducted for businesses and government agencies. Paul Goodman challenged Jaques' concept of time-span, but he failed to understand the very concept by seeking to ''measure'' time-span with a single-item questionnaire.[30]

MANAGER-SUBORDINATE RELATIONSHIP

Jaques believes that the first problem of bureaucratic organizations has been the failure to describe and specify adequately the main role relationships. He sees the key relationship, the one on which the bureaucratic hierarchy is built, as the manager-subordinate relationship. Managers must be held accountable not only for their own work, but the work of their subordinates, else the work will not get done. Problems arise when managers are not given the authority required to carry out their duties.[31] To do this, the manager must have at least minimal authority to veto new appointments, decide performance appraisals, and deselect unsuitable subordinates. Jaques' definition is remarkably simple and effective in explaining the complex social relationship between manager and subordinate and is the first to provide a clear and concise definition of managerial work.

Jaques' theory also examines horizontal role relationships and those of nonmanagerial positions such as professionals and technical specialists. The need to understand and clarify these relationships in terms of the functioning of the bureaucracy is no less critical. In fact, the failure to understand the different organizational role requirements for managers, technical specialists, and professionals has exacerbated the problems faced by many organizations, including libraries.[32]

STRATIFICATION IN BUREAUCRACIES

Stratified systems theory proposes that human work-capacity, the ability to engage in goal-directed behavior in work roles, is a function of the length of the period that a person is capable of managing activity through time. Furthermore, the very nature of work-capacity, unlike intelligence as measured by IQ tests, is viewed as discontinuous;[33] that is, there are changes in the way people at different time-span levels actually work. These differences occur in their perception of tasks, the planning and organization of their work, their accumulation of experiences, and "in the fullest sense, qualitative differences in the way they picture the world in which they are working."[34] The content of any work activity is distinctly different from the purpose or goal of that activity, and it cannot be assumed that any two people with the same job title are doing the same level of work.[35]

The results of applying the time-span of discretion measure led to the discovery of stratification in bureaucratic organizations. It revealed a pattern of discontinuous levels of work. These levels fall at regular intervals of three months, one year, two years, five years, ten years, and twenty years. Evidence points to the existence of even higher levels of fifty and one hundred years (see table 1). These levels of stratification, corresponding to levels of work and responsibility, suggest the existence of an optimal structure of working levels within bureaucratic hierarchies.

As stated above, the way in which two people perceive the same problem or activity will vary according to differences in their ability to draw abstractions over time. These individual differences in levels of abstraction (levels of work-capacity) are also observable in the depth-structure of bureaucratic hierarchies. Work requirements at each of the levels—that is, what is required to accomplish the goals of the job—are similarly discontinuous. Ralph Rowbottom and David Billis found that successively higher strata are judged to be more responsible and that there are significant differences of responsibility even within strata, forming a continuous scale of increasing levels of work.[36] Ideally, a person's capability at a point in time will match the work level of his or her current job. The work strata are described below, and complete descriptions are provided in Rowbottom and Billis' *The Stratification of Work and Organizational Design* and Jaques' *Free Enterprise, Fair Employment*.[37]

- Stratum 1—Prescribed Output (time-span of one day to three months): The output required is very concrete, completely prescribed, or able to be prescribed, as are the specific circumstances in which the tasks should be pursued. The work is anchored in rules. No decisions are made by the worker about what is to be done, only on how to go about it, by what method, and with what priority.
- Stratum 2—Situational Response (time-span of three to twelve months): Objectives must be judged according to the needs of each specific, concrete situation that arises. The work at this level, rather than solely producing a specific output or providing a prescribed service, consists of producing an appraisal or making an assessment. There is greater complexity than at Stratum 1, requiring the ability to handle a number of problems at one time and to work on them intermittently. This is the first-line managerial, professional, and technical level.
- Stratum 3—Systematic Service Provision (time-span of one to two years); The work goes beyond specific, concrete, case-by-case situations, to a need for envisioning a continuing sequence of situations. It involves problem solving and the development of systems and procedures that prescribe the way work in Strata 1 and 2 is to be carried out. Ambiguity is increased over that in Stratum 2.
- Stratum 4—Comprehensive Service Provision (time-span of two to five years): Work at this level requires the application of intuitive judgment to detect gaps in services, the ability to maintain mental contact with what exists but to detach from the day-to-day situation and develop new ideas that are a departure from the old. Problems are no longer seen in terms of individual tasks. There is a substantial increase in uncertainty compared with Stratum 3.
- Stratum 5—Comprehensive Field Coverage (time-span of five to ten years):

This is the level of the managing director. Stamp refers to this level as "redefinition of the rule."[38] It is characterized by entrepreneurial development and the development of new scientific or technical knowledge. The work domain at this level has become universalized, requiring the individual to operate in a mode unconstrained by existing words, ideas, or theories and to seek reformulations and original solutions.

Strata 6 and 7 have time-spans of ten to twenty years and twenty to fifty or more years, respectively, and are found only in the largest and most complex organizations. The levels of abstraction are such that the concern is with whole social and theoretical systems on a worldwide scale.

The descriptions of work strata and the levels of abstraction required at each stratum are extremely useful for clarifying roles and role relationships, for analyzing organizational structure in existing organizations, and for aiding in the design of new organizations. Table 1 illustrates the relationship between time-span, levels of abstraction, and work strata and the actual organizational structure found to exist in both the public and private sectors. It also illustrates how professionals and technical specialists fit into the hierarchical structure.

The research points to this depth structure as universal, providing a formula for designing bureaucratic organizations. By measuring the time-span at the top level of the bureaucratic structure, it is possible to determine the optimum number of managerial levels in the organization. The optimum distance between managerial levels is always one stratum. Real managerial and professional work emerges in Stratum 2, although trainees and interns are often found in Stratum 1. The results of poor managerial decisions in setting levels of work do not go unnoticed. The organizational consequences for improperly setting levels of work are profound.

Having too many levels results in commonly experienced dysfunctions: excessively long lines of command that result in much bypassing; uncertainty about who one's manager really is; too much red tape; or a feeling of too many levels being involved in a problem, or of the manager "breathing down one's neck." The result of having more than a one-stratum distance between the manager and subordinate is a subordinate's feeling of too great a distance from the manager. The manager, on the other hand, becomes impatient, expecting too much too quickly and a feeling that he or she must get involved in too much detail.

"FELT-FAIR" PAY

During his work Jaques accidentally discovered a high correlation between time-

TABLE 1

TIME-SPAN, WORK STRATA, AND DEPTH STRUCTURE IN ORGANIZATIONS

Time-Span	Work Stratum	Business	Military	U.S. Civil Service	Professional/Technical
20–50 Yrs.	VII	Corporation	Army (General)	Exec 1–2	—
10–20 Yrs.	VI	Corporate Group of Subsidiaries	Corps (Lt. Gen.)	Exec 3–5	—
5–10 Yrs.	V	Corporate Subsidiary	Division (Maj. Gen.)	GS 17–18	Senior Specialist
2–5 Yrs.	IV	General Management	Brigade (Brig. Gen.)	GS 14–16	Chief Specialist
1–2 Yrs.	III	Departmental Management	Battalion (Lt. Col.)	GS 10–13	Principal Specialist
3 Mos.–1 Yr.	II	First-Line Management	Company (Captain)	GS 6–9	Specialist
1 Day–3 Mos.	I	Shop & Office Floor	Platoons Squads (NCOs)	GS 1–5	—
1 Day	—	—	—	—	—

span and what employees' sense is a fair rate of pay for the work they are performing. Employees working at the same level, as measured by their time-span of discretion and independent of other factors such as type of work, age, sex, education, etc., state similar "felt-fair" pay rates.[39] In much of Jaques' work, including research done with Wilfred Brown,[40] and in studies by Roy Richardson,[41] G. E. Krimpas,[42] and Donald P. Gould,[43] it was found that for each time-span level there was a corresponding level of pay that employees felt to be fair, a concept that has come to be called "felt-fair" pay. The correlations have been reported at approximately +.90.

The results of chronic disparity between actual and equitable payment levels for socially connected groups, such as a professional group or members of the same organization, are cumulative and include low morale, chronic complaints about physical conditions or lack of opportunity, high turnover, and loss of qualified persons. Conversely, payment above equity results in feelings of anxiety, guilt, resistance to change and introduction of new work methods, and development of intransigent attitudes.[44]

The implications of Jaques' fair-pay findings are extremely significant. The fact that fair pay correlates so highly with time-span could lead to a linear ranking of all occupations from lowest to highest and the establishment of a shared sense of fairness regarding pay. An equitable work-payment scale opens up enormous possibilities ranging from the common situations of managers recommending pay increases for subordinates to issues of national importance, such as equal pay for comparable work.

THE STUDY

This study applied Jaques' theory to the work in academic library technical services departments in order to determine levels of work performed and to differentiate professional from nonprofessional work. It was hypothesized that distinct levels of work, corresponding to the first three time-span strata, would be found in the libraries studied. These positions have traditionally been identified as nonprofessional and professional, with an intermediate paraprofessional level that has never gained widespread formal acceptance. It was further hypothesized that persons at the same levels of work, as measured by time-span of discretion, would express the same rates of fair pay regardless of their actual work assignments or institutional job designations.

An approximately equal number of professional and nonprofessional employees were selected in four academic libraries ranging in size from roughly five hundred thousand to one million volumes. The libraries were selected on the basis of size, availability to the researcher, and their managements' willingness to participate. Precise matching of libraries by size was deemed neither important nor particularly advantageous. If differences in work roles in libraries of somewhat different size and/or structure emerged, so much the better, as it might provide additional directions for future research.

Included in the nonprofessional work roles studied are positions commonly known as library clerks and library assistants, in the following departments: acquisitions, bibliography/collection development, cataloging, circulation, serials, and data processing. Professional positions included the following: acquisitions librarians, catalogers, and collection development librarians. Individuals were randomly selected from lists of professional and nonprofessional employees arranged by job classification. A total of seventeen professionals and twenty nonprofessionals were included.

The methodology for data collection departed somewhat from traditional time-span studies that use an approach known as social analysis. Based on a long-term consultancy relationship, the social analyst offers help to a client group in return for information not ordinarily available in traditional social scientific research methodologies.[45] Social analysis has a dual role of promoting change while providing a research opportunity. The purpose of this research project was not to introduce change but to examine an occupational field in several institutional settings. It was thus necessary to develop a modified methodological approach, which the reader is encouraged to examine more closely before attempting to replicate this study.

Between the two extremes of the survey and participant observation approaches lies a methodology known as "intensive interviewing," an approach that uses a guided conversation and seeks to elicit materials of substantial depth for use in qualitative analysis.[46] This study used a combination of intensive interviews and structured questions to determine the following information about specific jobs for which Jaques and others have used the social analytic approach:

- the specific tasks in the job as described by the person in the job;
- the identification of whomever the subordinate perceives to be his or her true manager;
- the amount the employee feels to be a fair rate of pay for the work he or she is doing;
- the determination, on the part of the manager, of target completion times for the longest tasks assigned;
- any other data relevant to identifying the level of work for the job;

Interviews were conducted with the selected subordinates in order to identify the tasks in their roles. Participation was strictly voluntary, and interviews were conducted under conditions of confidentiality. At the end of each interview two structured questions were asked. The first sought to identify the person's manager according to Jaques' definition. The second question asked the subordinates to state what they felt would be a fair rate of pay for the work they were doing.

The issue of pay is a sensitive one. Determination of "felt-fair" pay can only be conducted under conditions of strict confidentiality and independence of the researcher from the organization.

Upon completion of the subordinate interviews, managers were interviewed. The manager interview is the key to time-span determination, for although it is possible to get a sense of time constraints from the person in the job, it is the manager who must decide the objective fact of when work is to be completed and to what level of quality. The purpose of this interview was solely and completely to get the manager to come to a firm decision, if possible, about target completion times for the assigned tasks. In most cases it was necessary to conduct several interviews with the managers. Two indispensable guides for determining time-spans are Jaques' *Time-Span Handbook*[47] and John S. Evans' critical work, *The Management of Human Capacity*.

Time-spans did not always emerge as neatly as one would have liked. One aspect of time-span measurement that makes it less than desirable for quick and easy job evaluation is its tendency to quickly reveal weaknesses in the executive structure.[48] In cases where managerial links are weak, such as among professionals, or where the organizational levels are compressed, the ostensible manager may indeed be operating at the same time-span level as the supposed subordinate, and thus measurement is impossible. Time-span research has shown that employees working at the same level of responsibility are unable to articulate the prescribed limits of others at that work level. Measurement is also difficult or impossible in situations where lines of authority and accountability are weak.

Difficulties may also arise from a misunderstanding of the task concept of work and the reluctance of people to verbalize tasks. Managers simply have not been trained to think in terms of the task content of work or in terms of implicit time constraints.

In addition to time-span data, the interviews began to reveal a consistent pattern of descriptive data about the ways in which people approached their work. In keeping with the qualitative descriptions of abstraction levels within work strata, it was observed that the complexity of the work changed dramatically as the level of responsibility, as measured by time-span, increased. Collection of this descriptive data was not part of the original research design, but began to emerge during the early, pretest, stages of interviewing. During the interviews with both subordinates and managers it became evident that there were obvious, qualitative differences in the way in which the work, at different levels, required the person in the job to go about carrying out that work. These observations reflect the demands of the work as assigned by the manager, not the capability of the individuals in the jobs.

Subjects were assigned to the appropriate stratum based on their measured time-span of discretion and/or their level of abstraction in work as determined in the interviews. There were no cases in which the time-span of discretion measure and the level of abstraction data were in serious conflict. However, in several cases time-spans were on the borderline between strata; in these cases the qualitative level of abstraction data was used to determine the appropriate stratum.

RESULTS

Distinct levels of work were found to exist in academic library technical services departments, as measured by time-span of discretion and corresponding to Strata 1 through 3. All those in Stratum 1 were in nonprofessional positions, while Stratum 3 included only professional positions. However, this study found a definite, observable, measurable overlap between professional and nonprofessional library work at the Stratum 2 level.

Nonprofessional work carried time-spans of between two weeks and twelve months, with the majority of positions (70 percent) at Stratum 1. The work conformed to the descriptions of work at Strata 1 and 2 levels. Professional positions emerged at the low end of Stratum 2, up to the middle of Stratum 3, with time-spans of between three and eighteen months and corresponding descriptions. The results are summarized in table 2.

This study also found an extremely high correlation between what respondents perceived to be a fair rate of pay for the work they were doing and the level of responsibility in their work, as measured by their time-span of discretion. The correlation coefficient was $r = +0.95$. Table 3 summarizes these results.

The "felt-fair" pay results are striking and support the findings of other time-span studies done by Richardson, Krimpas, and Jaques and Brown, noted above. Both professional and nonprofessional library employees evidenced a strong sense of what they considered fair pay for the work they were doing. Moreover, their sense of fair pay was consistent with their

TABLE 2

SUMMARY OF TIME-SPAN OF DISCRETION BY STATUS

Time-Span (in months)	.5	1	2	3	6	12	18
Status	1 N	4 N	7 N	2 N 1P	4 N	2 N 3 P	9 P

N = nonprofessional, P = professional.

TABLE 3

SUMMARY OF "FELT-FAIR" PAY (FFP) BY TIME-SPAN OF DISCRETION (TSD)

	Stratum 1			Stratum 2			Stratum 3
TSD (in months)	.5	1	2	3	6	12	18
FFP (in thousands of dollars)	15	12 15.5 15.5 15.5	20 18 20 20 11 18 19	18 18 19 [19] [19] [21] [22]	24 21 25 23	30 25 34 27 27	35 35 35 35 35 35 30 30 35

Note: Figures in brackets are for the four professionals whose time-spans of discretion could not be obtained.

level of work responsibility as measured by their time-span of discretion, although they worked in separate and distinct institutional settings. Of the four institutions included in the study, three were located in California, two in the same public system and one in a private, independent university. The fourth was a public university located in the Northeast. In the latter case, "felt-fair" pay rates were consistently lower than the other three institutions due to marked regional differences in pay and other economic factors. The fair-pay rates were adjusted, using an average of the difference between three published earnings and income data for the regions.

The four professionals for whom time-spans could not be obtained expressed fair-pay rates that place them somewhere between high Stratum 1 and low Stratum 2. Descriptive data indicated that their work conformed to Stratum 2; that is, their work could best be described as situational response work, and in no case were they assigned tasks that met the criteria for Stratum 3 work (systematic service provision).

The results provide further confirmation of Jaques' contention that people share a sense of fairness about the worth, in monetary terms, of the work they are doing. Whether there is a single, societal scale of equitable pay rates, as Jaques proposes,[49] is a matter requiring further study. This study found that persons employed in academic library technical services departments expressed "felt-fair" pay rates as shown below.

Stratum 1	\$15,000 to \$20,000
Stratum 2	\$20,000 to \$30,000
Stratum 3	\$30,000 to \$35,000+

In addition to the time-span and fair-pay data, information on the sex and level of education yielded interesting results. The data on education support the requirements established in the ALA personnel utilization statement.[50] For nonprofessionals in low Stratum 1 with up to a one-month time-span of discretion, the average education was one and one-half years of college, and all but one had some college background. High Stratum 1 personnel had an average education of about two years of college, with the A.A. degree prevalent. Stratum 2 personnel had an average of more than three years of college; 67 percent had at least a bachelor's degree. Curiously, none of the libraries had personnel classification systems that formally recognized this paraprofessional level. None of the position descriptions required this level of education, although managers agreed that they preferred to hire people who had the bachelor's degree.

This study's results generally support the position descriptions provided in the ALA statement on personnel utilization. In addition to recommending changes in the description of work activities, it was also recommended that an additional professional level be established that would recognize entry-level positions corresponding to Stratum 2 and overlapping the highest nonprofessional level.[51]

Women predominated, as expected, particularly at the lower levels. There was no difference between males and females in "felt-fair" pay when compared to their time-spans of discretion. It would appear that men and women in library work are equally socialized to the fair-pay levels for library work, but this question needs further research.

IMPLICATIONS

This study provides a beginning to the differentiation of professional and nonprofessional library work through application of the time-span measure. It also offers a means for answering the question of whether librarians are performing work at a level of responsibility equal to professionals and technical specialists in other fields. Most librarians studied were found to be working at Stratum 3 or high Stratum 2, levels at least equal to the beginning levels of other recognized professional and technical fields. That others were found working at low Stratum 2, or expressed corresponding "felt-fair" pay rates, is also significant. This is the level at which real managerial, professional and technical specialist work *emerges*, yet all of them had been employed in professional positions for some years. The fact that all were employed in the two smaller institutions in the study points to an issue that requires further investigation. To what extent was institutional size the prime factor in keeping these levels so low, or were other factors, such as management dysfunctions, responsible?

By applying stratified systems theory, it was possible to distinguish levels of work in the libraries studied. Time-span of discretion *did* give an objective measure of the manager's subjective determination of the level of work required in a work role. It accomplished this by concentrating on the goal of the activity—the output of the work, rather than the activity itself. This is an important distinction because, as pointed out earlier, past job evaluation studies in libraries have concentrated on the activities of the tasks, with results that were institution-specific and not generalizable.

Time-span analysis also provides a means for comparing work *within* a single organization, despite differences in actual work activities, and for analyzing the role relationships between various positions. Just as important, it offers a means for comparing and ranking previously noncomparable work roles independently of the organization. The implications for establishing comparable worth and for eliminating biases in determining wages and salaries based on sex or any other irrelevant factors, are significant.

It must be emphasized at this point that the time-span measure applies to specific individual roles studied and not to other roles with the same job title. As Jaques points out, one of the great fallacies in employment systems is the assumption that all jobs with the same title carry the same level of responsibility. What job titles *do* is describe the kind of activity found in a role.[52] Considerably more study of library positions will be required before any generalizations can be made about the differentiation of professional and nonprofessional work. Library managers now have available to them not only a tool for performing job evaluations but also a conceptual and theoretical foundation for analyzing the roles and relationships within their institutions. Asheim's call for a new approach to restructuring job descriptions and job classifications may now be answered.

The issue of the library as a bureaucracy and the relationship of professionals to the bureaucratic structure can now be studied within the conceptual framework provided by the time-span approach. Each organization must analyze its own structure and the relationships within, based on the realities of accountability and authority. Libraries have been badly managed in the past, in part at least, precisely for the same reasons found in other bureaucracies: managers have not been given the authority required to carry out their duties, and other role relationships, most notably the managerial/professional relationship, have not been clearly understood.

Stratified systems theory now has been shown to offer a clear opportunity to begin resolving issues that have defied solution for so long: determining levels of work; differentiating professional from nonprofessional work; defining and clarifying the roles of managers, professionals and technical specialists; streamlining the organizational structure; and establishing equitable wage and salary levels.

Time-span analysis also has implications beyond the organization. For example, in education for librarianship and the information services it offers a means for understanding the cognitive, intellectual abilities and skills required at each stratum. By applying the work stratum model educators should be able to assess requirements and design curriculum for the several levels of personnel ranging from clerks to technical specialists, paraprofessionals, professionals, and managers.

The implications of the fair-pay findings for establishing equitable pay rates are profound. If people indeed share a common sense of what is fair pay for the level of work performed, it is then possible to set rates of pay, for all types of work, that reflect these feelings. It is now possible, using this approach, to focus on the issue of pay in library work. Some of the serious personnel problems faced by libraries may indeed be the result of chronic disparity between actual and equitable pay, the effects of which were noted earlier.

The ultimate goal of any organizational study must be the achievement of improved organizational functioning, contributing to the well-being of not only the organization but also the people in it. This notion is best summed up by Elliott Jaques' concept of the "requisite organization." Such an organization not only meets the objectives that the executive system was set up to attain, but also contributes to the social health of the individuals employed in it by providing for the

major needs of the normal, maturely independent individual . . . his needs to utilize his full capacity in his work; to participate in making the laws to which he and his fellows conform; to have recourse to public processes of appeal; and to receive due recognition and reward.[53]

The single unifying thread through all the discussions in this study of levels of work, responsibility, stratification, executive structure, fair pay, etc., has been the *individual* and his or her role in the organization. Libraries will achieve success as social institutions meeting the needs of the greater society only to the extent to which they achieve requisiteness for not only the well-being of the executive structure but also for the social health of the individuals who comprise the structure.

REFERENCES

1. Robert B. Downs, "The Role of the Academic Librarian, 1876–1976," *College & Research Libraries* 37:496 (Nov. 1976).
2. Mary Lee Bundy and Paul Wasserman, "Professionalism Reconsidered," *College & Research Libraries* 29:17 (Jan. 1968).
3. Lester Asheim, "Manpower: A Call for Action," *Library Journal* 92:1795 (May 1, 1967).
4. Charles C. Williamson, *Training for Library Service: A Report for the Carnegie Corporation of New York* (Chicago: American Library Assn., 1923), p.3–4.
5. Downs,"Role of the Academic Librarian," p.496.
6. Asheim, "Manpower."
7. Dale E. Shaffer, *The Maturity of Librarianship as a Profession* (Metuchen, N.J.: Scarecrow, 1968).
8. Olga B. Bishop, *The Use of Professional Staff in Libraries: A Review, 1923–1971* (Ottawa: Canadian Library Assn., 1973).
9. American Library Association, Bureau of Public Personnel Administration, *Proposed Classification and Compensation Plans for Library Positions* (Chicago: American Library Assn., 1927).
10. American Library Association, Committee on the Classification of Library Personnel, *Budgets, Classification and Compensation Plans for University and College Libraries* (Chicago: American Library Assn., 1929).
11. California Library Association, Certification Committee, "Professional versus Non-Professional Positions in Libraries," *Handbook and Proceedings of the Annual Meeting, 1932.*
12. American Library Association, Office for Library Personnel Resources, *Library Education and Manpower* (Chicago: American Library Assn., 1970).
13. American Library Association. Office for Library Personnel Resources, *Library Education and Personnel Utilization* (Chicago: American Library Assn., 1976).
14. Myrl R. Ricking and Robert E. Booth, *Personnel Utilization in Libraries: A Systems Approach* (Chicago: American Library Assn., 1974).
15. Charlotte Mugnier, *The Paraprofessional and the Professional Job Structure* (Chicago: American Library Assn., 1980).
16. Leslie-Beth Rothenberg and others, "A Job-Task Index for Evaluating Professional Utilization in Libraries," *Library Quarterly* 41:320–28 (Oct. 1971).
17. John. S. Evans, *The Management of Human Capacity: An Approach to the Ideas of Elliott Jaques* (London: MCB Pub., 1979), p.82.
18. Richard B. Eggleton, "Achievement Motivation Theory as it Relates to Professional Personnel at College and University Libraries" (Ph.D. diss., Drexel Univ., 1978).
19. Edward E. Lawler, *Pay and Organizational Effectiveness: A Psychological View* (New York: McGraw-Hill, 1971).
20. Evans, *Management of Human Capacity,* p.93.
21. Lawler, *Pay,* p.5.
22. Elliott Jaques, *Health Services: Their Nature and Organization, and the Role of Patients, Doctors, Nurses, and the Complementary Professions* (London: Heinemann, 1978), p.114.

23. Louis Kaplan, "Professionalism, Decision-Sharing, and Bureaucracy," in *Studies in Library Management, Vol. 5,* ed. Anthony Vaughan (London: Clive Bingley, 1979).
24. Ralph M. Edwards, "The Management of Libraries and the Professional Functions of Librarians," *Library Quarterly* 45:150–60 (Apr., 1975).
25. Elliott Jaques, *A General Theory of Bureaucracy* (London: Heinemann, 1976), p.99–111.
26. Ibid., p.99.
27. Gillian Stamp, "Levels and Types of Managerial Capability," *Journal of Management Studies* 18:279 (Mar., 1981).
28. Jaques, *General Theory,* p.102.
29. Lawler, *Pay,* p.212.
30. Paul S. Goodman, "An Empirical Examination of Elliott Jaques' Concept of Time-Span," *Human Relations* 20:155–70 (1967).
31. Elliott Jaques, "Essential Developments in Bureaucracy in the 1980's," *Journal of Applied Behavioral Science* 16:443 (1980).
32. Catherine G. Burke, "Defining Professionalism: Time-Span of Discretion and Levels of Work," (Los Angeles: School of Public Administration, Univ. of Southern California, 1984).
33. Stamp, "Levels and Types," p.279.
34. Jaques, *General Theory,* p.143.
35. Ibid., p.159.
36. Ralph Rowbottom and David Billis, "The Stratification of Work and Organizational Design," *Human Relations* 30:56 (1977).
37. Elliott Jaques, *Free Enterprise, Fair Employment* (New York: Crane Russak, 1982).
38. Stamp, "Levels and Types," p.287.
39. Jaques, *General Theory,* p.110.
40. Wilfred Brown and Elliott Jaques, *Glacier Project Papers* (London: Heinemann, 1965).
41. Roy Richardson, *Fair Pay and Work* (Carbondale, Ill.: Southern Illinois Univ. Pr., 1971).
42. G. E. Krimpas, in E. Jaques, *General Theory,* p.229.
43. Donald P. Gould, "An Examination of Levels of Work in Academic Library Technical Services Departments Utilizing Time-Stratified Systems Theory," (Ph.D. diss., Univ. of Southern California, 1984).
44. Elliott Jaques, *Equitable Payment: A General Theory of Work, Differential Payment and Individual Progress,* 2d ed. (Carbondale, Ill.: Southern Illinois Univ. Pr., 1970), p.156–58.
45. Evans, *Management of Human Capacity,* p.167.
46. John Lofland and Lyn H. Lofland, *Analyzing Social Settings: A Guide to Qualitative Observation and Analysis,* 2d ed. (Belmont, Calif.: Wadsworth, 1984), p.12.
47. Elliott Jaques, *Time-Span Handbook* (London: Heinemann, 1964).
48. Evans, *Management of Human Capacity,* p.82.
49. Jaques, *Free Enterprise,* p.89.
50. American Library Association, *Library Education,* p.2.
51. Gould, "Examination of Levels of Work," p.158–62.
52. Jaques, *Free Enterprise,* p.156–58.
53. Evans, *Management of Human Capacity,* p.160.

Publication Requirements and Tenure Approval Rates: An Issue for Academic Librarians

W. Bede Mitchell and L. Stanislava Swieszkowski

One hundred and thirty-eight members of the Center for Research Libraries responded to a survey designed to test the hypothesis that where tenure-track librarians are required to do research and publish, an inadequate research and publication record would be the most frequent cause for the rejection of the librarians' tenure applications. The hypothesis proved valid, but only for a small percentage of the librarians. The study revealed a generally high tenure approval rate (81.5 percent) for academic librarians compared to the national average for other academic faculty (58 percent).

Recent studies and estimates indicate that some form of faculty status has been achieved by as many as 75 percent of practicing academic librarians.[1] Librarians' experience has shown that the benefits of faculty status are usually accompanied by new responsibilities. An issue of particular concern arises when institutions adopt promotion and tenure criteria for librarians that are similar, if not identical, to those used for the instructional faculty. When these criteria include the requirement to do research and publish, many librarians find themselves in unfamiliar territory because of

> . . . the very nature of library work as it is currently structured. The daily work load of most academic librarians usually limits, sometimes severely, the possibility of systematically developing and pursuing individual research interests. So too does the fact that most academic librarians have 12-month rather than 9-month contracts. Finally, even where research is required for professional advancement, there typically has been a lack of administrative support for it, exemplified by the failure to provide released time, clerical assistance, and funding in adequate amounts.[2]

This scenario suggests that librarians with faculty status may find it difficult to earn promotion and tenure when their research and publication standards are similar to those that their colleagues on the instructional faculty must meet. Traditionally, unlike the teaching faculty, research and publication has not been part of the job for the majority of academic librarians. While some librarians found the time to publish, as demonstrated by the numerous and long-published library journals, most did not. In fact, publishing was never an issue until librarians began to acquire "tenure-track" status. Therefore, the authors postulated that when academic librarians are required to produce research and publish in order to achieve tenure, the lack of such production would be the most frequent cause for an applicant to be denied tenure.

SELECTED RELEVANT LITERATURE

In her 1977 article "Publication Activity

W. Bede Mitchell is circulation librarian at Montana State University, Bozeman, 59717. L. Stanislava Swieszkowski was creative arts librarian at Montana State and is now art librarian, New York Public Library, New York 10012.

Among Academic Librarians,'' Paula de Simone Watson suggests that ''librarians with faculty status are likely to suffer where promotion and tenure decisions concerning them are subjected to the same review procedures used to evaluate the teaching faculty'' because of ''the low productivity found by the present study for professionals with five or fewer years of experience.''[3] Watson surveyed the publication records of librarians at ten large university libraries for the period 1970–74. She found that the median number of publications per year for publishing librarians was two. If book reviews were not included, the rate dropped to one publication per year. For all academic librarians at the surveyed institutions, the publication rate was significantly less than one publication per year. Of particular concern was the low output of librarians with five years or less experience (those within the tenure evaluation period). These librarians made up one-third of the surveyed staffs but produced only 18 percent of the publications for that period.

In 1980, Rayman and Goudy reported the results of a survey of sixty-eight libraries holding membership in the Association of Research Libraries (ARL). They found that only about 15 percent of librarians in the responding libraries were required to publish and that all librarians in this group had faculty status and were eligible for tenure.[4]

Thomas G. English surveyed the status of librarians at the eighty-nine U.S. academic member-institutions of ARL for the year 1982 and discovered that few institutions seemed to evaluate librarians under criteria used for instructional faculty. The most frequent evaluation model used at institutions with faculty status for librarians required that the librarians ''meet two distinct sets of criteria: one set designed to measure performance as librarians; the other set designed to measure performance as faculty.''[5]

METHODOLOGY

To determine whether or not research and publication criteria are major obstacles to academic librarians seeking tenure, a fourteen-question survey was sent to the directors of the one hundred and forty-seven U.S. academic libraries that are full or associate members of the Center for Research Libraries (see appendix A). The first three questions requested information regarding the status of librarians as defined at each institution, the length of time that the status had been in effect, and the eligibility or ineligibility for tenure. The rest of the questionnaire was to be completed only by those institutions where librarians were eligible for tenure and were required to perform research and publish in order to achieve tenure. The questions dealt with the kinds of publication standards to be met, the types of support available for librarians to carry out research, and the number of librarians who had and had not been granted tenure during the five years before receipt of the survey (mailed in April 1983). After follow-up mailings, 138 responses were received (94.5 percent response rate). One library director did not wish to participate in the survey, and eight other institutions did not respond.

FINDINGS

The data were grouped into four categories for analysis: by aggregate data; by college and university; by public and private institution; and by tenure eligibility/publishing requirement.

Of the 138 respondents, 50 (36.2 percent) claimed to have faculty status equivalent to the teaching faculty (see table 1). More than half, 72 (52.2 percent), had an academic status separate or different from the teaching faculty. Only 16 (11.6 percent) claimed a nonacademic professional status. These results parallel the findings of English, Rayman and Goudy. However, it is important to note that the authors here, unlike English, did not categorize each institution according to a predetermined definition of faculty status. Respondents to this study were asked whether or not they had ''faculty status equivalent to the academic instructional faculty.'' This definition allows for the varying interpretations of the term ''faculty status'' that may exist on different campuses. The authors were only concerned with whether or not librarians on a

TABLE 1

LIBRARIAN STATUS—138 RESPONDENTS

Categories	Equivalent Faculty Status (50 Institutions)		Different Academic Status (72 Institutions)		NonAcademic Professional Status (16 Institutions)		Other	Total
Public	44		51		5		0	
		50		72		16		138
Private	6		21		11		0	
College	4		2		2		0	
		50		72		16		138
University	46		70		14		0	
Tenure & Publication	27		11		0		0	
Tenure & No Publication	18	50	22	72	3	16		138
No Tenure	5		39		13		0	

given campus were categorized in a similar manner to other faculty *on that campus*. Therefore, the faculty-status answers reported in the survey do not necessarily reflect conformance or nonconformance to the ACRL definition of faculty status. It is significant that of the 70 institutions that responded to both English's survey and this survey, 62 indicated, in this survey, that they held the status for which they were categorized by English. Seven of the remaining 8, while categorized by English as having faculty status, indicated in this survey that their status was not equivalent to the instructional faculty.

Sixty-four (46.6 percent) of the institutions have held their particular status for more than sixteen years. Thirty-three (23.9 percent) of the respondents acquired their present status in the last eleven to fifteen years, 24 (17.4 percent) in the last six to ten years, and 13 (9.4 percent) in the last five years. Four institutions (2.9 percent) did not know how long they have held their particular status. It is interesting to note that 27 percent of all respondents have changed their status in the last ten years. Sixteen institutions have changed their librarians' status to nontenure track, 12 institutions have changed their status to tenure with no publication required, and 9 institutions have changed their tenure-track status to include publication. Similarly, English's survey revealed that institutions "were no longer inclined to shift librarians from non-faculty to faculty status, as was commonly done in the sixties and early seventies. Rather, the few, recent changes reported were all in the opposite direction, from faculty status to a non-faculty or modified faculty status."[6]

By a slight majority, 81 (58.7 percent) institutions have tenure-track status for most or all of their librarians, while 57 (41.3 percent) do not. (For a comparison of this study with the English and Rayman and Goudy studies, consult table 2.) Of those 81 institutions, 38 (46.9 percent) require evidence of research and publication before a librarian can achieve tenure, and

TABLE 2

ELIGIBILITY OF LIBRARIANS FOR TENURE

Survey	Tenure-Track Status		Nontenure-Track Status		Continuous Appointment (Different from Tenure)	
Rayman & Goudy	39/68	57%	29/68	43%	—	
English	38/89	42.7%*	10/89	11.2%	41/89	46%
MSU	81/138	58.7%	57/138	41.3%	—	

*This does not include a number of institutions that considered their "continuing appointments" tantamount to tenure.

42 (53.1 percent) do not require publication, although some indicated that publishing is encouraged (see table 3). Based on the survey results, the vast majority (100 out of 138, or 72.5 percent) of the academic librarians at the surveyed institutions were not required to show evidence of research and publication. Consequently, it is wise to bear in mind that the responses to the remaining questions on publishing requirements for tenure reflect practices at only a small group of institutions.

Within the last five years, 329 librarians at the 38 responding institutions were reviewed for tenure (see table 4). Sixty-one (18.5 percent) of these were not granted tenure; 268 (81.5 percent) achieved tenure. Thirty-five (57.4 percent) of those 61 librarians were denied tenure because of an inadequate research/publication record. Twenty-one (34.4 percent) were denied tenure for inadequate job performance and 10 (16.4 percent) for unknown reasons. Four (6.6 percent) were denied because of an inadequate service record (committee and professional service); and 1 person (1.6 percent) had an inadequate continuing education record. (In some cases more than one reason was given.)

TABLE 3

RESEARCH AND PUBLICATION REQUIREMENTS FOR TENURE

Survey	Yes		No	
Rayman & Goudy	10/68	14.7%	58/68	85.3%
English	—		—	
MSU	38/81	46.9%	43/81	53.1%

Of the 38 institutions that require research and publication, 97.4 percent gave credit for publishing books, chapters in books, and refereed journal articles in the field of library/information science.[7] Among the institutions, 89.5 percent gave credit for these publications outside the library field. Conference papers within the field of library science were given credit at 97.4 percent of the institutions; 81.6 per-

TABLE 4

TENURE APPROVAL RATES (FIVE-YEAR PERIOD)*

Institution #	# of Denied Tenure Applications	# of Librarians Applying for Tenure	% of Tenure Approval Rate
1	3	13	76.9
2	1	6	83.3
3	1	3	66.7
4	3	20	85
5	1	10	90
6	2	7	71.4
7	5	20	75
8	1	5	80
9	1	15	93.3
10	5	14	64.3
11	2	6	66.7
12	8	25	68
13	2	20	90
14	2	13	84.6
15	1	6	83.3
16	2	7	71.4
17	1	14	92.9
18	4	5	20
19	2	10	80
20	2	9	77.8
21	4	5	20
22	8	39	79.5
23 through 38	0	57	100
Total	61	329	
		Average	81.5%

*For the thirty-eight responding institutions where librarians have tenure-track status and are required to publish.

cent of the institutions gave credit for conference papers outside the library field. Unrefereed journal articles in the field were given credit by 89.5 percent of the institutions; however, only 68.4 percent gave credit for those publications in other fields. Book reviews in the field of library science were given credit by 84.2 percent of the institutions; book reviews outside the field of library science received credit at 73.7 percent of the institutions. In-house publications dealing with the library science field received credit at 63.2 percent of the institutions, while only 42.1 percent of the institutions gave credit for publications in other fields. For other types of publications in the field of library science, 18.4 percent of the institutions gave librarians credit; within other fields, 13.2 percent of the institutions gave them credit. The authors did not query the weight given to one type of publication over another. Readers are referred to the report of a survey published in *College & Research Libraries* by Geahigan, Nelson, Saunders, and Woods.[8]

None of the 38 institutions required that the librarians produce a specific number of publications. As a result, there were no responses to the inquiry regarding how the standards relative to the specific number of publications were applied to librarians, i.e., are they agreed upon individually or are they the same for all librarians?

At 29 (76.3 percent) of the institutions, librarians are eligible for sabbaticals, and at 19 (50 percent), librarians are eligible for release time (see table 5). At 21 (52.6 percent) of the institutions, it was felt that the research and publication standards for librarians were different from those applied to the teaching faculty. Seventeen (44.7 percent) of the institutions felt that there were no differences.

TABLE 5

AVAILABILITY OF RELEASE TIME/RESEARCH LEAVE

Survey	Yes		No	
Rayman & Goudy	35/68	51%	33/68	49%
English	72/89	80.8%	17/89	19.2%
MSU	19/38	50%	19/38	50%

The library provided funding for librarians at 18 (47.4 percent) institutions, while at 20 (52.6 percent) of the libraries, it did not (see table 6). The colleges and universities made funding available to librarians at 34 (89.5 percent) of the institutions, 2 (5.3 percent) of the libraries were not eligible, and 2 had no institutional funding.

TABLE 6

AVAILABILITY OF RESEARCH FUNDING

Survey	From Library		From University	
Rayman & Goudy	18/68	23%	40/68	51%
English	64/89	71.9%	—	
MSU	18/38	47.4%	34/38	89.5%

CONCLUSIONS

1. The responses provided by the institutions in the sample support the hypothesis that the most frequent cause for librarians being denied tenure is an inadequate research and publication record. It should be noted that at some institutions, explicit reasons are rarely or never given by review boards when tenure applications are denied. Therefore, some of the respondents may only have been speculating about the reason(s) why their librarians were rejected (although none indicated that they were doing so).

2. The high tenure rate (81.5 percent) reported by the respondents who require research and publication for tenure (see table 5) compares very favorably with the tenure approval rates of other faculty. A study by Frank J. Atelsek and Irene L. Gomberg found that in 1978–79, 12,400 individuals were formally reviewed for tenure nationwide, and 58 percent were approved.[9]

3. The high tenure approval rates for librarians required to publish are consistent from respondent to respondent, as only 2 out of 38 institutions (see table 2) reported approval rates of less than 64.3 percent (see table 5). High tenure rates occurred regardless of factors such as availability of release time, sabbaticals, etc.

4. Based on the results of this study, it would appear that Watson's theory that li-

brarians who are required to publish may have problems achieving tenure is unfounded. It may be significant, however, that of the 37 respondents who changed their librarians' status during the last ten years, only 9 have adopted publication requirements for achieving tenure. By contrast, 12 institutions adopted tenure-track status that does not require publication, and 16 institutions changed to nontenure-track status. The survey did not solicit information regarding the nature of, and reasons for, these changes.[10]

5. Eighty-one (58 percent) of all the respondents reported tenure track status for most or all of their librarian positions, yet only 38 of these institutions require evidence of research and publication before granting tenure to librarians. Consequently, it would appear that tenure-track status for librarians does not always imply the requirement to publish.

REFERENCES AND NOTES

1. C. J. Schmidt, "Faculty Status in Academic Libraries: Retrospective and Prospect," in *New Horizons for Academic Libraries,* ed. R. D. Stueart and R. D. Johnson (New York: K. G. Saur, 1979), p.411.
2. Darrell L. Jenkins, M. Kathleen Cook, and Mary Anne Fox, "Research Development of Academic Librarians: One University's Approach," *Journal of Academic Librarianship* 7:83–86 (May 1981).
3. Paula de Simone Watson, "Publication Activity Among Academic Librarians," *College & Research Libraries* 38:382 (September 1977).
4. Ronald Rayman and Frank W. Goudy, "Research & Publication Requirements in University Libraries," *College & Research Libraries* 41:43–48 (January 1980).
5. Thomas G. English, "Librarians Status in the Eighty-Nine U.S. Academic Institutions of the Association of Research Libraries: 1982," *College & Research Libraries* 44:199–208 (May 1983).
6. English, "Librarian Status in U.S. Academic Institutions," p.207.
7. Priscilla Geahigan, Harriet Nelson, Stewart Saunders and others, "Acceptability of Non-Library/Information Science Publications in the Promotion & Tenure of Academic Librarians," *College & Research Libraries,* 42: 571–75 (Nov. 1981).
8. One college with religious affiliation gave no credit to publishing done within the library science field.
9. *Tenure Practices at Four-Year Colleges & Universities,* by Frank J. Atelsek and Irene L. Gomberg, Higher Education Panel Report no. 48 (Washington, D.C.: American Council on Education, 1980), p.1–49.
10. It is possible that some or all of these changes were due to difficulties encountered by librarians attempting to meet publication requirements.

APPENDIX A: QUESTIONNAIRE

Name of Institution ____

1. Which of the following best describes the status of librarians at your institution? (Please check the appropriate responses.)

______a. faculty status equivalent to the academic instructional faculty

______b. academic status separate or different from the academic instructional faculty

______c. nonacademic professional status

______d. Other (please explain)

2. How long have the librarians at your institution had this status?

______ 0–5 years ______ 6–10 years ______ 11–15 years ______ 16+ years

3. Are your librarians eligible for tenure? ______ yes ______ no

4. If librarians are eligible for tenure, must they show evidence of research and publication in order to achieve tenure? ______ yes ______ no

If the answer to #4 is no, it is not necessary to go further. Please return the questionnaire as completed thus far. Thank you.

5. If research and publication is required of librarians in order that they may earn tenure, for which of the following kinds of research do librarians receive credit? (Please check the appropriate response.)

	Library/information science topics & publications	Topics & pubs. in other fields
books or chapters in books	______	______
refereed journal articles	______	______
unrefereed journal articles	______	______
conference papers	______	______
book reviews	______	______
in-house publications	______	______
other (please specify)	______	______

6. Is there a specified number of publications that librarians are required to produce in order to achieve tenure? ______yes ______no

7. If a specified number of publications is required, please check the appropriate response if the standards are either (a) agreed upon periodically between each librarian and his/her supervisor, or (b) the same for all librarians. ______a. ______b.

8. Please check the appropriate response if librarians are eligible for (a) release time, or (b) sabbaticals. ______a. ______b.

9. Are the research and publication standards for librarians different from those applied to other faculty on campus in recognition of the librarians' different work responsibilities? ______yes ______no

10. Is funding available from the library for librarians to carry out research for publication? ______yes ______no

11. If the institution makes funding available to academic faculty for research, are librarians also eligible to receive this funding?
 ______eligible
 ______no funding
 ______not eligible

12. At your institution, how many librarians have been reviewed for tenure in the last five years (or since librarians became eligible for tenure, if that was less than five years ago?) ______

13. How many of those applicants were *not* granted tenure? ______

14. Please indicate how frequently each of the following factors resulted in the rejection of an application for tenure. (For example, reason (a) may have been cited or inferred in four cases of rejection, so "4" should be entered next to (a).
 ______a. inadequate research/publication record
 ______b. inadequate job performance
 ______c. inadequate service record (committee service, professional service)
 ______d. inadequate continuing education record
 ______e. unknown
 ______f. other (please specify or comment)

Thank you very much for completing this questionnaire. Your time and effort is greatly appreciated.—*W. Bede Mitchell & L. Stanislava Swieszkowski.*

It's Your Choice.

For your free acquisitions assistant, call Clearwater Publishing Co. collect at (212) 873-2100 or write to 1995 Broadway, New York, N.Y. 10023.

Don't you wish all your choices were this easy?

Letters

To the Editor:

Your editorial on the evaluation of reference question answering in the January issue of *C&RL* is very timely. Reference management, including evaluation of reference service, is a priority concern of the Reference and Adult Services Division of ALA, and the division's program at the Annual Conference in July will be on this topic. A number of articles on evaluation of question answering have been published fairly recently in the division's journal, *RQ*.

Some of your readers may not be aware that a rather new committee (founded in 1982) of RASD, the Evaluation of Reference and Adult Services Committee, has become an important forum for action and information exchange in this area. The committee has produced a sort of "roundup of recent developments" piece that appeared in the Spring 1983 issue of *RQ*. This piece resulted, in part, from our liaison with other ALA units with concerns and activities in this area (including ACRL), a liaison that continues actively. We have also gained all but final divisional approval for strengthening the evaluation components of the division's guidelines, "A Commitment to Information Services," and we are cooperating in the planning for the division's conference program mentioned above.

One of the committee's responsibilities is to disseminate information to the profession. In that regard, we would point out that the Fall/Winter 1984 issue of *The Reference Librarian* is a theme issue on evaluation of reference services. Also, Ronald Powell published a comprehensive review of research in this field in the January-March 1984 issue of *Library and Information Science Research*. The recently published supplement to Marjorie Murfin's and Lubomyr Wynar's *Reference Services: An Annotated Bibliographic Guide* cites and annotates numerous reference evaluation studies.

Yet, with all these studies, more remains to be done. Objective and accurate data need to be gathered and to be considered in a variety of contexts, whether in quality circles of reference staff members, in planning and decision making by managers, or in the self-dialogue and reflection of individual reference librarians. We thank you for your support for insightful research and information sharing in this important area.

SARAH PRITCHARD, chair, and
CHARLES A. BUNGE, former chair
ALA/RASD Evaluation of Reference and Adult Services Committee

To the Editor:

I enjoyed your editorial in the January issue of *C&RL*. All librarians need to reflect more on "how well they are doing." Unfortunately, I believe that reference work is as much an art as a science; performance is, thus, difficult to quantify. Although it doesn't directly address your concern, I believe Constance McCarthy's paper at last year's ACRL Conference ("Paraprofessionals, Student Assistants, and the Reference Clan") goes a long way in describing how a reference *department* might maximize its effectiveness. Your concern is with the individual; McCarthy's is holistic. In any case, the Padres didn't win the series even with Tony Gywnn's startling batting average.

C. PAUL VINCENT
Ohio State University

To the Editor:

I have just read your editorial "Performance at the Reference Desk" with great interest. In the past two years we have been exploring that perplexing issue—evaluating reference desk performance—in an attempt to answer "how well am I doing?"

As a result of an extensive literature search and many discussions regarding our approach to this long-standing problem; deciding what to measure and how, we have developed procedures which, I feel, go beyond those traditional evaluative techniques which have strictly involved quantitative measures. In our minds, these studies were too restrictive for our needs at William Paterson, and, as a result, we have developed a tripartite approach in our attempt to measure reference service, taking a more subjective and qualitative approach. Measurement instruments have been developed for patron survey, self-evaluation and supervisor observation. The criteria or factors which we feel are critical aspects of our service have been determined, and are the elements which we are hopeful will be measured by this approach.

NORMA LEVY
Head of Reference, William Paterson College of New Jersey

To the Editor:

Having experience in teaching English composition, and also in library instruction, I was pleased to see Constance Mellon's article "Process not Product in Course-integrated Instruction" (November 1984). The University of Tennessee at Chattanooga's program is exemplary, and Mellon's report makes a long overdue contribution to the literature. The logical refinement of course-integrated library instruction is to integrate the conceptual framework of the library component into the framework of the course. And yet, the process approach to writing has developed and guided freshman composition (a primary target for course-integrated instruction) for almost ten years now with minimal attention to teaching library use as a part of that process.

The search process model presented by Mellon (Figure 2: Basic Search Strategy for Beginning Composition Students) appears to be useful and teachable. The model addresses all the actions that are presumed necessary to effective use of the library, and offers effective strategies for the neophyte searcher, yet it remains simple and straightforward enough to present to students in clear, memorable visual aids.

However, more research is needed to validate this and similar models of the search process. We need to collect and analyze data on how research writers approach and use libraries. The techniques used to validate the writing process, such as protocol analysis, should also be applied to the search process.

JAMES T. NICHOLS
Public Services Librarian, Indiana University East

To the Editor:

I am writing in response to Karen Kinney's letter of comment (September 1984) on my article "Research and Library Skills: An Analysis and Interpretation" (March 1984). My initial perception was that anyone who had read my article carefully would realize that Ms. Kinney misinterpreted much of what I said. That being the case, a response on my part would be superfluous. A more careful reading of her letter, however, has convinced me that the attitudes or assumptions that underlay her reaction ought to be addressed, for they say much about a certain mindset among some in the profession that I personally find disturbing. I shall therefore approach her letter on two levels. I will address the issue of whether she understood correctly what I was saying, and I will direct my comments to the assumptions that seem to underlie her remarks.

Ms. Kinney's initial statement claimed that the logical deduction to be made from the data I presented was that bibliographic instruction is useless. That was not my conclusion. I stated that "undergraduate and graduate students, who are unable to operate with the broad knowledge and solid bibliographic base of research scholars, can find library skills valuable in initiating their first timid efforts at 'research.' " Further on in the same paragraph I said that "an introduction to the access and synthetic literature . . . can be for students a significant educational experience, even a revelation." I then devoted several paragraphs to pointing up ways in which librarians might improve the tone of bibliographic instruction units.

Ms. Kinney goes on to state that she disagrees "with the notion, attributed to instructors, that library assignments have no educational value." What I said was this: "Indeed, the limited extent of courses involving library components could be interpreted to indicate that many professors have doubts about the educational benefit of turning undergraduates loose on an independent literature search in a discipline they still scarcely understand—hence the emphasis in most undergraduate courses on assigned readings selected by the professor." Ms. Kinney did not convey the literal tenor of my original statement, which I stand behind. I would offer my personal experiences as an example of circumstances in which library assignments are not necessarily appropriate.

During the eleven years I was a college professor before entering librarianship, I taught courses to students at all levels, from freshmen through doctoral candidates. It would never have occurred to me to give a term paper to a class of 128 freshmen in a required Western Civilization course. In the first place, no one could reasonably supervise and grade that many papers, even with the one graduate grader I had been assigned. In the second place, hardly one percent of these students would go on to become history majors. And in the third place, the students had difficulty enough understanding an introductory text written specifically for freshmen. To attempt to introduce them to scholarly literature in the form of monographs or articles in learned journals identified through *Historical Abstracts* would have been absurd. Ms. Kinney's criticism of textbook use is ill-founded. Scholars write monographs and articles in learned journals for other scholars. They write texts and other synthetic works for undergraduate students.

Even in my upper level courses in Latin American history, fewer than half my students were history majors. Many were majoring in language, education, business, political science, anthropology, and a smattering of other disciplines. Few of these students would go on to graduate school. What need did they have to be forced to use the *Handbook of Latin American Studies* or *HAPI*, most of whose entries were in Spanish or Portuguese?

My philosophy was that if my students could read only six books during the semester, they would be better served if I selected those six books in order to guarantee some quality control and better integrate their readings into the themes that I had laid down for the course. I feel very deeply that my philosophy was perfectly defensible, though by no means do I criticize those who choose to teach in other ways, depending on their circumstances.

As I indicated earlier, I cite my own experiences only as an example. I am certain I could find numerous other courses on campus, ranging through most freshman and sophomore courses, courses in math, studio art, voice, photography, piano, dance, engineering, chemistry, physics, and so on, in which term papers or other kinds of library assignments are not particularly helpful. As a matter of fact, if every course on campus incorporated a library assignment utilizing the assistance of a reference librarian, not only would the library break under the strain but students would be subjected to essentially the same lectures ad nauseum and ad infinitum. In any case, the faculty have been hired to teach the credit courses in the degree-granting colleges, to determine the content of those courses, and to evaluate and to grade the students. The kinds of assignments they choose to give is their business, not ours. They are accountable to each other for how they teach, not to us in the library, who rarely have taught a credit course in anything other than library science.

Ms. Kinney goes on to assert that though the evidence indicates "that the faculty do not use indexes and other access tools," she contends that "many of them could actually profit from a systematic search of the indexes in their fields." I never stated in the article that the faculty do *not* use indexes, only that they find other techniques for gathering bibliography more efficient and helpful. There are few researchers who are unfamiliar with the leading indexing systems in their disciplines and who do not use them as needs dictate. If they do not consult these tools with greater frequency, it is because they do not find them as useful as other approaches. Neither Ms. Kinney nor I have the expertise to read a finished article on molecular biology, radioastronomy, or Byzantine history and decide if it was well researched or not. Nor can we determine whether the author used an index or not, nor if the article could have been better had the author used an index. Put simply, it is a waste of energy and breath to sit in the library offering gratuitous criticisms of how the faculty use or do not use reference tools in their research. All that we as librarians can do is make efforts to familiarize the faculty with potentially helpful sources. When and how they choose to use those tools is their concern, not ours. They will be held accountable by their peers in their own disciplines, not by librarians, who seldom have matching degrees and who have rarely published anything that would qualify as solid research.

Ms. Kinney concludes that the faculty need to be educated to understand "the mission and goals of libraries," which she does not define, and singles out my observation that the faculty dislike using microforms as an example of their "narrow and self-serving point of view." I agree that there are some faculty with narrow and self-serving points of view, just as there are some librarians with narrow and self-serving points of view. I would point out, however, that *no patrons* like to use microforms. I would also quote myself with regard to microforms and other inconveniences that faculty find in libraries. "The preceding observations," I wrote, "are not meant to suggest that every library can, in every case, accommodate the ideals of research scholars. Practical and inescapable limitations of space and finances must often play the dominant role in decision making." I see nothing in what I said that should have provoked the kind of reaction Ms. Kinney had.

Ms. Kinney's defensiveness about the faculty, her gratuitous criticisms of their teaching and research, and her claim that they do not understand the "mission and goals of libraries" cannot but make one wonder how she views the role of the library relative to the degree-granting colleges. She implies that the library's mission is to teach library skills because all educated people need such skills in our "information society." It would follow, it seems to me, that she expects the faculty to structure their courses in such a way as to give the library its chance to teach library skills. Indeed, Ms. Kinney expresses considerable resentment of faculty who do not give library assignments in all their courses. In all of this, I believe, she has the library tail wagging the teaching-college dog.

I have always understood that a university is an association of scholars dedicated to expanding, disseminating, and transmitting knowledge. The faculty are those who expand knowledge through their research, disseminate it through publications and conference activity, and transmit it to succeeding generations through the curriculum they have organized. The library's mission is derivative from and subordinate to that of the broader institution, whose heart, all rhetoric aside, is the degree-granting colleges.

The mission of the academic library is to support the research and teaching of the faculty by acquiring, organizing, and making available those materials of a bibliographic nature needed for scholarly research and teaching. The faculty have the prerogative of doing their research in whatever ways seem beneficial to them, subject to peer review within their respective disciplines. Likewise, they have the prerogative of organizing their courses as they see fit. Librarians are not trained as researchers and rarely have experience teaching a subject discipline. This being the case, our criticisms are an example of self-defeating behavior that avails nothing. Like it or not, the library is not a degree-granting college, and except in rare cases the bibliographic instruction it offers has no official recognition in the curriculum.

Bibliographic instruction in the pure sense is a legitimate activity for librarians, for it consists of arranging with those professors who desire it to assist their students in fulfilling the course objectives that they, the instructors, have laid down. The term "bibliographic" is appropriate, since it describes what librarians really do. We teach bibliographic techniques helpful in doing literature searches or tracking down limited kinds of "information," such as statistics. In other words, we are assisting the faculty in achieving curricular objectives that they have determined. Furthermore, it should come as no surprise that the faculty think in terms of teaching their subject disciplines, not some vague and ill-defined "library skills," a term I am coming to dislike even though I used it in my article.

The idea of the necessity of teaching "library skills" or "information-seeking skills" that will be of life-long benefit to the educated person rests on a series of assumptions that have never been supported with solid empirical data. There have been no good studies demonstrating that many people have a sincere interest, going beyond lip-service, in devoting time and energy to acquiring such skills when there are professional librarians trained to assist them. Likewise, there have been no good studies demonstrating that three or four hours of library instruction spread over four years of undergraduate education really suffice to impart library skills; that the average college graduate could pass a library skills test six months after graduating from college; that the average college graduate, no matter how heavily exposed to library skills in school, will ever be more than an occasional or sporadic user of the library in later life; or that librarians, who I suppose do possess such skills, are any better educated, better informed, or more knowledgeable than millions of other middle-class people successfully plying their trades as diplomats, politicians, businessmen, accountants, college professors, nurses, engineers, or architects. How significant is it, really, that any librarian—academic, public, or special—can pass a library skills test whereas Henry Kissinger cannot? How significant is it that Mr. Kissinger may not have used the *Readers' Guide* in the last forty years?

As a matter of fact, I think all librarians should ask themselves, seriously, how frequently they themselves use reference tools to satisfy personal information needs. They should ask themselves how frequently, if ever, they use the *Readers' Guide*, the *Monthly Catalog*, the *Index to the New York Times*, the *Book Review Digest*, or *Masterplots* to satisfy personal information needs. We complain that we do not see the faculty using the index tables frequently, but how often do we see our own colleagues in the library sitting at the index tables except in the line of duty? If librarians, who are familiar with hundreds of library tools, seldom use them except to help patrons or put together BI units, the assumption that exposing others to these tools will somehow precipitate more widespread use of them is highly questionable. At Wichita State, where more than 90 percent of the students are commuters who live near campus year-round, the most casual observer will notice that when classes are not in session, when students are no longer being obligated by their professors to go to the library, the library becomes a tomb. This is so after at least ten years of an active library instruction program.

Bibliographic instruction judiciously targeted on advanced-level professional or graduate courses designed to prepare students in discipline-based research methods can serve a valuable purpose. Ill-defined, poorly thought out, scattershot attempts to teach some abstract "library skills" or "information-seeking skills" may be a waste of human and material resources that libraries can ill afford when they are becoming increasingly hard pressed to justify the heavy investments they have been making in the seemingly bottomless pit of public service activity whose returns cannot be quanitified.

STEPHEN K. STOAN
Wichita State University

Recent Publications

BOOK REVIEWS

Geller, Evelyn. *Forbidden Books in American Public Libraries, 1876–1939: A Study in Cultural Change.* Westport, Conn.: Greenwood, 1984. 234p. $29.95. LC 83-12566. ISBN 0-313-23808-1.

When Ivan Carnovsky said, in his classic 1950 essay in *Library Quarterly,* "I have never met a public librarian who approved of censorship or one who failed to practice it in some measure," he put his finger on one of the most fundamental dilemmas faced by both academic and public librarians. For the late Eli Oboler and many like-minded crusaders, the problem of censorship in libraries has essentially turned on the question of whether one has made an adequate commitment to the moral goal of intellectual freedom; censorship, as David K. Berninghausen suggested in the title of his 1975 book, represents a *Flight From Freedom.* But is that too facile an explanation for censorship as a historical phenomenon?

Nearly thirty years ago, in a report commissioned by the National Book Committee in 1956, Robert K. Merton and others called for a more objective approach. What was needed, they said, was research into the social psychology and economics of reading and the sociology of censorship. Through the years a number of ambitious studies have been undertaken, such as Charles Busha's study of the attitudes of midwestern public librarians (*Freedom Versus Suppression and Censorship,* Littleton, Colo.: Libraries Unlimited, 1972) and Marjory Fiske's study of school and public librarians in California (*Book Selection and Censorship,* Berkeley: Univ. of California Pr., 1959); but few if any would have satisfied Merton, and certainly none treating the pre-McCarthy era. Until now.

Evelyn Geller's book—the refinement of her 1980 doctoral dissertation at Columbia—is first and foremost an ambitious contribution to the sociology of professions. It is one of the very rare sociological studies of librarianship, and rarer still for its soundness and readability. Quite apart from her explanation of the development of the ideology of librarianship at midcentury, Geller makes a major contribution with the theoretical approach she takes to the structural dynamics of professional development. Hers is an approach that might be applied with great advantage to the study of other professions.

Many readers will value Geller's study for the historical account it gives of librarians' changing responses to issues of censorship and academic freedom in America during the six decades between the founding of the ALA and the outbreak of the Second World War, an account she puts together almost entirely from statements and news items in *Library Journal* and other published sources. Early on, the librarians in her study were ardently defending their role as censors in book selection against outside efforts to liberalize the public library. Later both public and academic librarians, in the name of freedom and the public interest, actively resisted censorship pressures from their communities and eventually enshrined their beliefs in the *Library Bill of Rights* adopted by the ALA in 1939.

But the change was not simply a process of developing a more mature sense of the correct balance between freedom and censorship (some degree of which is inevitable in book selection); for, as Geller shows, many features of our profession, including its goals and functions, have not been givens but have changed considerably as social situations and acceptance by others have shifted. She correctly surmises that the development of professional ideology is irregular and does not reflect something so obvious as the progressive evolution of a basic mission, or the swing of a pendulum from conservatism to liberalism, but is a multidimensional process that requires a more complicated theoretical explanation. This she finds in the "role-set" model and the play of competing values between librarians, their clients, and their sponsors (trustees, university bureaucrats, etc.). She identifies three major lines of stress as a source of recurring conflicts in the period covered by her study: disputes arising out of the assertion of institutional and status autonomy and those emerging from what she calls the "elitist-populist dilemma" and the "neutrality-advocacy dilemma." It is a thoroughly original approach, and only occasionally does the inevitable jargon of her discipline make trouble for the nonsociologist reader.

As a postscript, one cannot resist adding that in 1967, when Geller first published an article on this subject in *Library Journal*—indeed, one that was included in Eric Munn's anthology, *Book Selection and Censorship in the Sixties* (New York: Bowker, 1969)—she was editor of *School Library Journal;* today she works as an investment broker.—*William A. Moffett, Oberlin College Library, Ohio.*

Light, Richard J., and David B. Pillemer. *Summing Up: The Science of Reviewing Research*. Cambridge, Mass.: Harvard Univ. Pr., 1984. 191p. $17.50. LC 84-4506. ISBN 0-674-85430-6. (alk. paper)

Advancing knowledge through a process of cumulation requires accurate and perceptive analyses of what has been studied, what has been discovered, and what remains to be done. Reviews of the literature, the authors maintain, are commonly inadequate to the task, and they discuss, in detailed and sophisticated fashion, ways to improve them. They have excellent credentials for their task, Light as professor at Harvard's Graduate School of Education and Kennedy School of Government and Pillemer as assistant professor of Psychology at Wellesley College.

A review of previous research, though an established expectation, is all too often done *pro forma* and in pedestrian fashion. The most common approach is simply to summarize, serially, studies that seem to have some relationship to the new study being undertaken. The result is often more confusing than helpful, for the summarized studies have been based upon different definitions, assumptions, and methods and produce findings that are inconclusive or even contradictory. The researcher frequently concludes that the best course is simply to ignore the past and to begin again. Light and Pillemer convincingly argue that well-done reviews not only can prevent such duplication but, even more important, can help to shape improved research studies that genuinely advance knowledge.

In approaching their task, the authors emphasize four "themes":

First, each review should be shaped to respond to a specific question or to a particular purpose; a review designed as the basis for a pragmatic program decision ought to be quite different from a review that seeks to discover fundamental relationships.

Second, disagreements among studies, far from suggesting despair, ought to be considered opportunities for understanding; that different findings appear in studies carried out in different places, for example, may suggest locales and their cultural components as promising variables for further investigation.

Third, the natural appeal of the objectivity of quantitative measures should not be allowed to eliminate qualitative components; a statistically valid relationship may be comprehensible only in the context of informed interpretation of the real world situation.

Fourth, statistical precision cannot replace clear theoretical understanding; almost always, even when a number of studies seems to produce consistent findings, penetrating judgment and analysis will add depth and breadth to the results.

The book contains six chapters. After the first introductory chapter, the second, "Organizing a Reviewing Strategy," presents the authors' conviction that a review should be structured to focus upon a specific question rather than simply to summarize a number of studies. "Quantitative Procedures" discusses selecting techniques appropriate to the question rather than routinely using conventional measures. Being soundly knowledgeable, Light and Pillemer are not intimidated by the mysteries and magic of statistics. For example, before even discussing statistical measures, they are careful to point out that every summarizing measure involves the loss of some of the details of the underlying facts and that a researcher should be mindful of the implications of taking even that first step. Going on, they illustrate how the customary emphasis upon measures of central tendency often masks important variation and suggest, among other things, the potential of careful analysis of outliers as a means to sharpen understanding.

"Numbers and Narrative: The Division of Labor" argues for careful attention to individual cases as a source of increased understanding and clarification. Throughout the work, the authors keep their attention close to the real-world events that are being studied and, to an extraordinary degree, they avoid the trap of becoming so enamored with methods and devices as to forget the true purpose of an investigation. They illustrate their general principles with examples and thus make themselves unusually clear. One ingenious device is a "box" presented along with the text in the same way that charts and tables are conventionally used. Within the box, they discuss in detail an example that illuminates a point in the main text. This device gives the reader the benefit of extended explanation without loss of the sequence and pace of the narrative discussion. "What We Have Learned" gives specific examples of ways that reviews have advanced knowledge by clarifying general findings, by integrating a variety of findings, by settling controversies, and by providing new insights into various research strategies. The final chapter gives a checklist of characteristics and questions to use in assessing and improving reviews.

The whole book reflects alert and informed intelligence that, without pomp or pretension, sets out purposefully to reform and improve a key element in the whole process of thought and research by which scholars hope to add to knowledge. The informed wisdom behind the book makes its advice and insights applicable to virtually all aspects of scholarship. It is thus a book that repays reading by almost anyone involved in serious study and is entirely likely to satisfy the publisher's prediction that it will "become a methodological classic."—*W. L. Williamson, University of Wisconsin, Madison.*

Metz, Paul. *The Landscape of Literature: Use of Subject Collections in a University Library.* Chicago: American Library Assn., 1983. 143p. (ACRL Publications in Librarianship, no.43) $30. LC 83-15511. ISBN 0-8389-3286.

This work is a thought-provoking study of the use of libraries, and it is likely to become one of the most influential as well. Metz, user services librarian at Virginia Polytechnic Institute and State University (VPI), analyzed data from VPI's automated circulation system in order to answer the question, "Who reads what?" Information on 58,457 books in circulation to 10,126 borrowers on two days in May 1982 provided the data for the study. The circulation data provided information on five categories of borrowers, their departmental affiliation (or major), and the classification of the borrowed material, broken into eighty-one subject categories.

This review can only summarize some of the most important results of Metz's study; the 143 pages are packed with information. His most important finding is that the use of library collections is extremely interdisciplinary, much more so than previous studies have indicated. Metz writes:

> The data show quite clearly that the majority of faculty use of most subject literatures is by outsiders—that is, by readers with other specialities than those primarily associated with those literatures. The findings support a view of the library as a most unrestricted and unpredictable bazaar for the exchange of ideas and reflect a much more catholic and interdependent view of knowledge than citation studies have ever suggested. This view of library use, in turn, suggests policies stressing the integration of services, an opposition to arbitrary barriers to the flow of information, and the avoidance of narrow specialization. (p.56–57)

In the sciences, Metz's study shows that not only did faculty in the sciences use the monographic collection (a majority had books checked out), but his study reinforces other use studies that indicate that a large majority of the science faculty's library needs are met by books in the sciences. However, the VPI study showed a higher use of literature outside the faculty's specific discipline than indicated by citation studies.

Social scientists at VPI were heavy library users (two-thirds had books checked out; with an average of 16.3 books) with extensive reliance on materials outside their specific disciplines. Geographers were especially interdisciplinary; only 7.8 percent of books in use by geographers were classed in geography, while 22.4 percent were in economics, and 9.5 percent were in sociology. Only 10.5 percent of books in use by psychologists were classed in that discipline. While these figures are not inconsistent with the findings of citation studies, what is new and surprising in the Metz study is the extent of interdisciplinary use of the collections.

Metz suggests that reliance on fund allocations to departments for book selection may not build balanced collections, because the needs of departmental users may not be the same as those of nonspecialists from whom much of the use materials in the discipline will come.

Periodicals often present problems in use studies. Since at VPI periodicals do not circulate, they were not part of this larger study. However, Metz attempted to monitor their use in the library's photocopy service. While the sample was small, the use "seems" to follow similar patterns as for monographs, but with "a more narrow concentration of use on materials in core literatures."

As almost 70 percent of the books were

charged to students, their use was also analyzed. Metz found that reading patterns of graduate students were similar but not identical to the faculty in the same area as the graduate student, the former showing greater concentration in the area of specialization. Undergraduate use was broader and less predictable.

In an interesting chapter, Metz questions if branch libraries affect this extensive interdisciplinary use of the collections. He compares VPI (with only two branches) with the University of Nebraska at Lincoln, a similar educational institution but one whose library has eleven branches. Using circulation statistics from Nebraska to replicate, as much as possible, the VPI study, Metz concludes that the existence of branch libraries does influence patron use of the collections heavily, and what is read by whom.

This is an excellent work, one with which all librarians should be familiar. It is a pioneering study in the use of circulation data to study use of a library's collections. Metz's study will be the model for studies at other libraries.—*William Z. Schenck, University of Oregon.*

Lincoln, Alan Jay. *Crime in the Library: A Study of Patterns, Impact, and Security.* New York: Bowker, 1984. 191p. $26.95. LC 83-22288. ISBN 0-8352-1863-5.

Security for Libraries: People, Buildings, Collections. Ed. by Marvine Brand. Chicago: American Library Assn., 1984. 128p. $12.00. LC 84-455. ISBN 0-8389-0409-2.

Consistent with a long tradition of service, librarians, especially in public institutions, have tried to provide an environment that encourages active patron use of the materials in their repositories. Attaining this laudable goal, however, can often prove elusive because they also have a concomitant responsibility to protect their collections, facilities, fellow staff members, and patrons from those who destroy property, abuse staff, annoy legitimate users, and damage, if not wrongfully remove, materials. In the process of performing these duties in a publicly accessible library, a staff member may suffer physical injury, psychological stress, and even loss of life such as that which occurred at the Cleveland Public Library in late 1984. Contrary to the public perception of libraries as safe and comfortable institutions, works such as Bruce A. Shuman's *The River Bend Casebook: Problems in Public Library Service* (Phoenix: Oryx Pr., 1981), and its 1984 sequel, *River Bend Revisited,* dramatize very well the point that all libraries are far from being sanctuaries from the ills that plague society.

Making libraries more secure places is an area that has attracted much attention in the last two decades. As noted in one of the studies reviewed below, for example, the number of articles on matters of library security that were indexed in *Library Literature* rose from 27 for the period 1950–59 to 336 for the period 1970–79. Interest in this multifaceted area is evident in other forms as well. Not only is there a journal devoted solely to *Library and Archival Society;* but, on a regular basis, various book-length studies—such as Brand's and Lincoln's—appear.

In addition to four separately authored essays, Brand's book contains a topically arranged bibliography. Each narrative follows a standard format and includes an outline of important points relative to security at the end of the essay. Although this work is designed primarily for academic, public, and school libraries, it provides information that will prove helpful to all librarians whatever their specialty. Thomas W. Shaughnessy's "Security: Past, Present, and Future," for example, goes well beyond a historical overview and the futuristic concerns of library security by reviewing many of the advantages and disadvantages of different types of security systems. Other essays focus on the need for a procedures manual, training programs, and the hiring of guards. The final essay, "Legal Aspects of Library Security," is the most thought-provoking piece, inasmuch as the authors identify issues such as the increasingly important area of constitutional or civil rights torts and their relationship to libraries. Among other pertinent aspects are the potential for liability suits and the need to update an institution's liability insurance. Every library director, in particular, should derive some benefit from reading this chapter.

Although the essays are very readable and the checklists at the end of each are useful, *Security for Libraries* has neither an index nor a detailed table of contents listing the subheadings in each chapter. Either of these devices would have facilitated access to the text. Also, the introduction to the bibliography does not identify the date of the latest publication that is included in the compilation. It is a timely work, and although the bibliography is useful—especially for its classification of relevant titles into nine major categories—it includes only works published before 1983. These minor points notwithstanding, this volume is an excellent departure point for librarians who need to become familiar with many of the issues involved in library security.

Crime in the Library is of more limited appeal. Based on national crime statistics and the results of a nationwide survey, this study contains a wealth of detail on eighteen types of crime, ranging from book damage to arson, that occur in libraries in the United States. Every state is represented, and the principal focus of the work is on the public library. In terms of format, the information is arranged into six chapters, the first of which discusses more general topics such as national crime patterns. A later section contains a discussion on crime in other publicly accessible facilities such as schools, recreational areas, and religious institutions. In addition to a thorough index, the work includes two appendixes, one being the survey instrument used by the author.

Lincoln, an associate professor of law and justice at the University of Lowell, conducted this library crime research project in five stages over a three-year period. Of 2,920 surveys sent out, some 57 percent, or 1,657, were returned. According to table 9 (p.68), he rejected 94 of these because of unsuitable replies. Of the remaining 1,563 valid returns, over 59 percent came from libraries in cities of less than ten thousand people; and, as reflected in table 9, over 85 percent originated from libraries in cities with a population of fifty thousand or less. Based on the author's analysis, "the typical high-crime library . . . was located in a city of nearly 50,000 people. Only 1 percent was in towns of less than 10,000 people" (p.82). Indeed, no incidence of crime was reported at 95 percent of the libraries in municipalities with less than ten thousand people.

Although a sizable portion of Lincoln's sample could not be used to identify crime patterns because no episodes were reported, the absence of such information is indicative of how carefully the author reports his findings and interprets his data. On the whole, his methodology is sound and the survey instrument generally comprehensive without being cumbersome. Magazine articles on the occurrence of crime in various libraries are also interspersed throughout the text and provide momentary respite from the numerous tables and statistics.

The tables are valuable but they are difficult to access because there is no central listing for these thirty-four distinct items. A reader must scan the volume before locating pertinent ones, especially for comparative purposes. Other important information is virtually nonexistent. The author examines only overt types of crime and disruption; he does not assess the more subtle form of theft involving the intentional non-return of overdue materials.

Despite this omission, this work is a useful source for administrative officers who require recent data to demonstrate that library crime is a serious problem. Preparing a persuasive case is no easy task, and the author identifies the difficulty involved in trying to convince library governing boards of the need for a security program. He also shows that libraries tend to expend little or nothing on this activity. Indeed, there is more of a reactive tendency than one of initiative in responding to security problems. Crime is nevertheless an area with which administrators have to deal, and Lincoln provides a variety of statistics that may prove applicable to recommending a better security program based on the unique needs of one's institution. Among other useful portions of this study is his description of the five major components involved in designing a security system.—*James W. Geary, Kent State University, Ohio.*

The Expanding Role of Telecommunications in Higher Education. Ed. by Pamela J. Tate and Marilyn Kressel. San Francisco: Jossey-Bass, 1983. 115p. $8.95. ISBN 0-87589-954-4.

Like most books comprised of collected pieces by various authors from various disciplines, this one suffers from a lack of continuity and focus. The editors set out nobly enough by concluding in their opening notes: "We believe that the driving force behind the development of new programs and systems should not be simply the allure of new technology. Rather institutions should continue to base their decisions about new ventures in telecommunications on the educational and societal problems that they wish to solve and on the learner needs that they wish to meet." However, the book fails to explore these problems and their possible solutions. Instead it takes you through some rather mundane discussions: why more educational television material isn't produced, audiovisual media-use statistics, and Robert Gillespie's unexceptional views on computing in higher education, which have virtually no relevance to the issues at hand, at least as they are defined by the editors. Michael Goldstein writes about public policy, but this is not related back to learner needs. Glenn Watts' article about the changing workplace is better reading than the others, but most readers will find the veneer of the content awfully thin. The editors' concluding comments are the best part; they capsulize the few useful points made. But after reading the book, I did not feel I had gained any real insight into the telecommunications issues that confront our colleges and universities today. The effectiveness of using telecommunications and computing in education is assumed from the start. There is no consideration of where either might be inappropriate or ineffective. We are not provided a strategy for planning or a road map to guide us into the future of telecommunications. We are not given new insights into the technology.

The book is a disappointment, for telecommunications is a misunderstood and inadequately planned area on most campuses, and good guides on the subject are sorely needed. This book does not fill the vacuum. Most readers would get just as much insight into telecommunications issues for campus administrators and planners by reading the *New York Times* education supplements or the *Chronicle of Higher Education*.—*Thomas Hassler, University of Alaska, Fairbanks.*

Radford, Neil A. *The Carnegie Corporation and the Development of American Libraries, 1928–1941.* Chicago: American Library Assn., 1984. 267p. (ACRL Publications in Librarianship, no. 44) $29.95. LC 83-25710. ISBN 0-8389-3295-9.

Frederick P. Keppel was already acquainted with a number of the nation's library leaders when he became president of the Carnegie Corporation in 1922. Among them were Carl Milam, executive secretary of ALA, and William Warner Bishop, director of libraries at the University of Michigan and past president of ALA. Throughout the thirteen-year period discussed in this book, these three men were fated to work closely together on several programs intended to increase the effectiveness of academic libraries. The author describes those programs and how they came about, discusses their role in contemporary academic librarianship, and assesses their effectiveness in meeting their implicit and explicit aims.

Although most of the programs have been forgotten by all but the most senior of us today, they were viewed during the period as central to the most significant developments in academic libraries. Principal among these programs, in the minds of most academic librarians at the time, were a series of collection development grants made by the Carnegie Corporation to four-year, junior, teachers', black, and state colleges and to technical institutes. In determining who should receive these grants, Keppel relied almost entirely upon several advisory groups of librarians and educators, all chaired by Bishop. In total these groups were instrumental in seeing that some $1,636,800 was granted to 248 institutions for strengthening their library book collections. In addition, the corporation granted $1,824,500 to college libraries on its own initiative.

Among other accomplishments within the academic library profession that resulted from Carnegie grants between 1928 and 1941 were the development of the first sets of four-year and junior college library standards, the preparation by Charles B. Shaw of the first list of books for four-year colleges and of Foster Mohrhardt's list of books for junior college libraries, and B. Lamar Johnson's "library-college" experiment at Stephens College. Carnegie support also led to the writing of William M. Randall's landmark monograph on *The College Library,* B. Harvie Branscomb's classic *Teaching with Books,* Erret McDiarmid's treatise *The Library Survey,* and James T. Gerould's pioneering *College Library Building.* In addition, the nation's first centralized library acquisition program was established and operated for thirteen years under Carnegie auspices at the University of Michigan.

All of these activities are treated in this book. The author appears to acknowledge the importance to us of all of them save the program of book-fund grants. Here he opines that perhaps fewer but larger grants would have done more good. He laments the absence of objective evaluative material in the Carnegie archives and, finding no hard evidence of success, cautiously and somewhat dourly assumes no success. Although he may be right in his assumption, one feels constrained to recall that this period spanned the years of the Great Depression when many American colleges, as well as individuals, went bankrupt and when money was worth vastly more than it is today. Perhaps, at the time, simple survival itself, even courtesy of the Carnegie Corporation, was a form of success. Moreover, it may seem a bit inappropriate to fault the Carnegie for lacking sophisticated evaluative mechanisms a half-century ago when few if any grant-furnishing foundations, or government agencies for that matter, have them today.

This is an excellent book, thoroughly researched, effectively presented, and well documented. It belongs alongside George Bobinski's *Carnegie Libraries,* which documents the foundation's earlier role in the provision of library buildings, and John Richardson's *Spirit of Inquiry,* which recounts its place in the evolution of library education and research. Taken together, this scholarly trilogy constitutes a massive and salutary reminder of the profession's great debt of gratitude to the remarkable Carnegie philanthropy, even if we assume that the program of grants for book-fund support was not a complete success.—*David Kaser, Indiana University, Bloomington.*

Young, Kenneth E. et al. *Understanding Accreditation: Contemporary Perspectives on Issues and Practices in Evaluating Educational Quality.* San Francisco: Jossey-Bass, 1983. 502p. (Jossey-Bass Higher Education Series) $27.95.ISBN 0-87589-570-0.

Another solid, useful reference tool has been born and added to the education librarian's shelf. A long time in coming, it will be worn and dog-eared before the next accreditation team has left the campus. Indeed, if such an experience is imminent on your campus, it is recommended that several copies be added to your shelves.

The book purports to "fill the need for a comprehensive and current resource for understanding accreditation" and the writers say it is "designed to serve both as a general reference and as a training tool" for those who make or are influenced by decisions regarding the accreditation of educational institutions. One will find here a full accounting of the various accreditation agencies and their purposes, noting relationships and even conflicts that exist between and among them. The self-study process is analyzed, as well, with guidelines offered as to how it can be more constructive and less threatening.

The accreditation process in higher education cannot be likened to a holiday pleasure, a factor that is well recognized by the writers of this volume. One university president is quoted in the book as saying that administrators "are tired of having the educational and financial policies of their institutions dictated by a horde of irresponsible outsiders, each representing a separate selfish interest." The chief editor of this volume calls accreditation "a struggle over standards," noting that various interest groups within the institutions contend with one another and that inevitably accreditation "feels the force of those pressures and also bears the brunt of criticism from those whose interests are not served."

As a title in the Jossey-Bass Higher Education Series, *Understanding Accreditation* was in process for a period of at least four years by the chief editor, Kenneth E. Young. Dr. Young, executive director of the National University Continuing Education Association and past president of the Council on Postsecondary Accreditation, is qualified to write on the subject and to seek out others to assist him in issuing this volume. Charles M. Chambers and H. R. Kells, whom Editor Young describes as "two of the nation's most knowledgeable students of accreditation," contribute a sizeable share of the content of the volume, but we were impressed with the astuteness of other chapter authors as well. They can be credited with covering a broad spectrum of topics related to the accreditation principle and process, from its complexity to details about specific aspects, and from government controls to the protection of students from consumer abuse. The importance of encouraging administrators to view accreditation as a helpful tool rather than as a threat is pointed out by one of these writers. Another speaks to the need for self-regulation, one of the principles of accreditation, and yet another writes of the importance of voluntarism as a concept in the accreditation process.

Eighteen chapters and an epilogue make *Understanding Accreditation* a complete work on the subject. The experience of the contributors is evident in their writings and the balance in their views is a credit to the work.

This title can be recommended as authoritative, readable, and current. Every academic library should own a copy, and the price is right.—*Roscoe Rouse, Jr., Oklahoma State University.*

Rare Books 1983–84: Trends, Collections, Sources. Ed. by Alice D. Schreyer. New York: Bowker, 1984. 581p. $39.95. LC 84-174331. ISBN 0-8352-1756-6.

The first in a proposed series, *Rare Books 1983–84* surveys the main areas of interest to the field in nineteen essays, which comprise the first 159 pages, then provides a set of directory listings, covering more than 400 pages, followed by an index. The essays are split into three groups, the first seven surveying the sale of books and manuscripts during that year to private collectors and institutions in the United States, Canada, and Great Britain. Other than references to the sale of the fake Hitler diaries and the Gospels of Henry the Lion, Europe and the rest of the world are scarcely mentioned. Within this limitation, however, the events in the rare-book world in 1983–84 are adequately and interestingly surveyed by authors including Kenneth W. Rendell (dealer); Katherine Leab, and Daniel Leab (*American Book Prices Current*); Robert Nikirk (Grolier Club); and William Matheson (Library of Congress).

The review of research and publishing in part two contains essays by G. Thomas

Tanselle on bibliographic and scholarly publications, Daniel Traister on books about books, and Peter M. VanWingen on relevant serials. This section is especially useful in providing a summary listing with critical comments for librarians and others wishing to keep up on current literature. VanWingen includes lists of periodicals by subject and alphabetically by title, with subscription information.

Current issues and programs make up the third group of nine essays, with entries on automation (Stephen Paul Davis); preservation (Carolyn Harris); theft (Marie E. Korey); and taxes and donations (Carol C. Henderson). Five programs or organizations are described: Columbia's Rare Book School, the American Antiquarian Society's Program in the History of the Book in American Culture, the Library of Congress's Center for the Book, ACRL's Rare Books and Manuscripts Section, and the Society of American Archivists. The essays in this group are brief factual surveys. Appended to Carolyn Harris's article on preservation is a list, with addresses, of selected preservation materials suppliers and conservation facilities.

The second major section of the book contains the lists and directories. The brief section on educational opportunities could and should be expanded. A reader unfamiliar with individual programs in the listed library schools, except for the entries covering Columbia's library school and that for the University of Denver, would be unable to determine from the entries whether the various programs would allow for significant specialization in the rare books and manuscripts field. The other lists are: associations, auctioneers, appraisers, libraries, and dealers. There is of course some duplication from lists available elsewhere, and the 210 pages devoted to dealers is, perhaps necessarily, unwieldy. The separate listing of appraisers is an especially useful directory.

In discussing periodicals for the rare book trade, Peter VanWingen points out that these types of publications often set standards in fine printing and graphic design. Unfortunately, this book, intended for the rare book enthusiast, fails in both those areas. All purchasers of reference books can empathize with efforts to keep production costs down, but reading the textual sections of this book, interesting as they are, will make most readers cry out for larger and darker type. The contents of a valuable reference book deserve better presentation.—*Stephen H. Cape, Indiana University, Bloomington.*

Magrill, Rose Mary, and Doralyn J. Hickey. *Acquisitions Management and Collection Development in Libraries.* Chicago: American Library Assn., 1984. 241p. LC 84-9288. ISBN 0-8389-0408-4.

Library Acquisition Policies and Procedures. Ed. by Elizabeth Futas. Phoenix, Ariz.: Oryx, 1984. 2d ed. 615p. $38.50. LC 82-42925. ISBN 0-89774-024-6.

It is a good time to reexamine the relationships between acquisitions and collection development work. Closely allied, these two areas form the heart of the library. And it is especially appropriate to turn attention to collection development at a time when available resources do not appear to be keeping pace with the costs of purchasing materials, paying salaries, and providing adequate equipment for the library staff and users, hence interfering with libraries' ability to provide for the varied needs of their patrons. The two books reviewed here are both revised versions of earlier works, updated precisely because libraries of all types have been experiencing both new economic constraints and, ironically, the pressures of technological advances, which are rarely inexpensive. It is the task of collection development, at times frustrating, to reconcile these conflicting demands in careful, rational, and creative ways.

An excellent work from nearly every angle, *Acquisitions Management and Collection Development in Libraries* builds on Stephen Ford's 1973 *The Acquisition of Library Materials,* also an ALA publication. Acquisitions work has become more complex since Ford's book appeared, and Hickey and Magrill leave no stone unturned in describing and reviewing the ways in which this aspect of library work can be managed. The book's premise is that "without an effective acquisitions management and collection development program, the expectations of library users can never be met'' (p.ix). This point is carried throughout the book: regardless of the size or type of library or the budget available, certain basic functions are crucial to fulfilling the goals of the institution. From here, Magrill and Hickey go on to discuss and evaluate those aspects, ranging from vendor performance to the structure of gifts and exchanges programs to bibliographic searching and faculty participation in collection development, which give form to an acquisitions department.

The division of the book into discrete task-oriented chapters is an especially strong point. The exposition within each section of the multiplicity of functions associated with what may, on the surface, seem to be a straightforward facet of the job helps to bring into focus the frequently blurred line between acquisitions and collection development work. The authors do more than report, however; in each chapter they propose a variety of innovative arrangements to serve as points of reference (and, perhaps, trial and error) for a range of library types—public, academic, special.

Collection development has been described as ''one of the most discussed but least understood areas of librarianship'' (p.3). It encompasses so many tasks, small and large, part public service, part technical service, that it often does elude definition. Thanks are due to Magrill and Hickey for casting a bright light on a complex operation. They must also be praised for their apt use of statistics and the extensive bibliographies that follow each of the twelve principal sections. This book will be an enduring contribution to the field. It should be read by any individual who is curious about collection development and by library students with such an inclination and also should be kept close at hand by all who are involved, formally or informally, in this area. They will find it useful as they find themselves, for example, grappling with approval plans, organizing serials records, or facing the difficult task of developing written collection policies, locally, regionally, or nationally.

While Hickey and Magrill's book is a comprehensive volume concerned with all shades and hues of acquisitions work, taking for granted that collection development and acquisitions go hand-in-hand, *Library Acquisition Policies and Procedures* takes a more narrow approach. First published in 1978, this revised edition consists of a short introduction to the subject and to the survey methodology, followed by the complete acquisitions policies of ten academic and fourteen public libraries. Also included is a compilation of partially reprinted policies from another handful of institutions.

In the brief introduction, the author oversimplifies what it has meant to libraries to be faced with decreasing resources. She refers to collection development as ''current jargon,'' as if it were a passing fancy. Futas establishes a strange dichotomy between quality and quantification in building and maintaining collections, claiming that the need to be more accountable for money spent has brought about the ''demise of quality collections . . . it has meant the downplaying of goals and objectives, principles of selection, and intellectual freedom'' (p.vi). I would argue, as I suspect would Magrill and Hickey, quite the opposite: it is precisely because of this difficult process of institutional soul-searching and analysis that librarians have been forced to work still harder to establish meaningful priorities and to devise careful collection policies.

The book is an ambitious undertaking, born as it was of an extensive survey and report of responses. Futas, however, does little more than lay out policies from libraries as dissimilar as Gallaudet College, South Seattle Community College, Boise Public Library, and Fort Vancouver Regional Library. Her purpose is unclear insofar as she warns her readers away, in her final introductory paragraph, from adopting the policies of other institutions even partially. This would seem to defeat the original purpose of presenting ''sample'' policies, since examining the results of the efforts of other institutions holds no danger as long as the unique set of circumstances of one's own library are taken into consideration before attempting to devise a comprehensive collection development policy. General models can and should be followed, especially in these days of increasing national-level cooperation. By no means will that lessen the amount of local effort and careful planning that must go into a policy. We are not interested in copying each others' policies; we do want to learn by sharing insights and processes. That goal is indeed possible by referring to this book and to the many examples of acquisitions policies it presents.

In reporting on the survey she conducted to determine the extent to which libraries have written and/or unwritten acquisitions policies, Futas shares some useful information with her readers. However, of some 4,500 questionnaires distributed, only 327 "usable" responses were returned. From this information the author has created a profile of academic and public library collection policies and processes. The idea is a good one; it is unfortunate that Futas did not disaggregate her respondents further by size, however, since the categories of "public" and "academic" make subtle analysis difficult at best. For example, the range of materials budgets represented in her first group, academic libraries, runs from \$0–\$9,999 (two libraries) all the way to \$1 million or more (some twenty libraries), with a peak at \$100,000–\$249,999. It is impossible to draw any meaningful conclusions about patterns in academic libraries with such a wide spread of statistical information. Yet, for example, Futas uses this data to calculate percentages about who initiates order requests. It is not surprising that her survey shows that the number of bibliographers and collection development officers who are responsible for orders is low (9 percent and 16 percent, respectively), nor that faculty participation is high (55 percent); most smaller academic libraries are understaffed in their collection development functions and rely heavily on faculty for initiation of orders. Had the author grouped her respondents according to size, a different and more accurate picture would have emerged.

In conclusion, it should be stressed that these two books are not truly comparable. The Futas volume is important as an example of the wide range of ways in which libraries organize their acquisitions functions. It will be a useful working tool for staff participating in the development of policies, although its audience will necessarily be more narrowly defined than the readership of the Magrill and Hickey work. The latter will only serve as a guide to the intricacies of collection development work and as a source of citations for further reading on many related subjects.—*Deborah Jakubs, Duke University.*

Retrospective Conversion: From Cards to Computer. Ed. by Anne G. Adler and Elizabeth A. Baber. Ann Arbor, Mich.: Pierian, 1984. 312p. \$39.50. LC 84-81656. ISBN 0-87650-177-3.

Most libraries today are facing or have already faced the task of converting paper card catalogs to machine-readable files, with attendant planning and discussions of local policies and procedures to be followed in the conversion process. Because of this common simultaneous process, the American Library Association LITA ISAS/RTSD Retrospective Conversion Discussion Group serves as a popular forum for airing retrocon issues. Case studies are interesting starting points for the group's biannual meetings, providing the same excellent background material that warrants their use in the many journal articles that treat retrospective conversion. An entire book composed of case studies of retrospective conversion projects, however, makes for difficult reading. Lack of an index makes access to specific topics virtually impossible, so that one must read every detail of every project or else know in advance which project most closely matches the needs of his or her institution.

The editors obviously had good intentions in bringing together the separate projects into one book, since their early experience had shown them that not much was available on retrospective conversion. Their solution was to collect the papers presented at the discussion group with two updated versions of original projects into this book. As with many other collections, the articles themselves vary in style and depth. Some have been tightly edited for publication while others appear to be the original speech presented to the discussion group. Some projects are described concisely with an attempt to focus on the broader issues of retrospective conversion, such as authority control and manipulation of holdings data. Other articles drone on about local policies and procedures, and several articles are buried under descriptions of local problems, such as illustrations of every possible variation of shelf list card notations. One article even includes a "collage" of memos from the author to her staff about the retrocon project, along with other "cute" illustrations to promote the project itself and the resulting com catalog. Some of the appendixes can only be labeled as filler to make the chapter or the book itself look respectable; why else include seven pages of "Tables of Holding Library Symbols," plus "Handling of Stamps on Cards" and "Color-coded Envelopes to be Used in Flagging Problems"—in all seven appendixes totaling fifty-one pages? Although the editors did try to represent all types of libraries, their bias shows toward academic libraries and especially toward their home institution, Rice University (four of the fourteen articles). Adler and Baber or the Pierian editors should have exercised more control in putting together this book. There is much that is superfluous and a lot that is redundant in this method of compiling descriptions of separate conversion projects. Some of the projects, such as MITINET/retrocon and Texas A&M, have already been explained in journal articles, which makes the $39.50 price seem a bit much.

For the library planning a retrospective conversion project, Ruth Carter and Scott Bruntjen's 1983 *Data Conversion* provides a solid introductory overview of retrospective conversion. It is more current than the 1978 *Library Technology Reports*, "The Conversion of Manual Catalogs to Collection Data Bases." If a librarian wants to know what other libraries did (for better or for worse), or what they would or would not do again, *Library Literature* indexes a multitude of articles on retrospective conversion; these allow readers to much more effectively match type of institution, material format, or other considerations to their needs.—*Doris R. Brown, DePaul University.*

ABSTRACTS

The following abstracts are based on those prepared by the ERIC Clearinghouse of Information Resources, School of Education, Syracuse University.

Documents with an ED number here may be ordered in either microfiche (MF) or paper copy (PC) from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, VA 22210. Orders should include ED number, specify format desired, and include payment for document and postage.

Further information on ordering documents and on current postage charges may be obtained from a recent issue of Resources in Education.

Reproduction of Copyrighted Materials for Classroom Use. A Briefing Paper for Teaching Faculty and Administrators. Association of Research Libraries, Washington, D.C. July 1983. 18p. ED 241 052. MF—$0.83; PC—$1.82.

Intended to serve as reference material for discussions with teaching faculty and other members of the university community, this paper and its attachment provide guidelines for members of the Association of Research Libraries (ARL) on fair use and the classroom and library photocopying provisions of the Copyright Act of 1976 (PL 94-553). Factors involved in determining whether a particular use is a fair use of a copyrighted work are outlined. The provisions of the 1976 "Classroom Guidelines" are reviewed and described as unsuitable in the context of postsecondary education. Also outlined are issues related to the reproduction of musical works, copying for reserve room use, and the "umbrella" statute recommended by the Association of American Publishers (AAP). Attachments include a briefing paper for librarians and archivists on current issues in library photocopying and copyright and a University of Wisconsin-Madison policy statement on photocopying for teaching and research, which is suggested as a model for other universities. The policy statement covers copying that is completely unrestricted, copying that is permitted, copying for which teachers should obtain permission, and publishers' guidelines for making multiple copies for classroom use. Information on how to obtain permission for copying and a sample letter requesting such permission are also provided.

College Library Buildings in Transition—Looking at the 1980's. By Richard L. Snyder. Talk delivered before the Conference on College and Academic Library Buildings in the 80's (New Stanton, Penn., Oct. 14–15, 1983). 44p. ED 241 057. MF—$0.83; PC—$3.32.

This paper examines the likely effects of technological developments on the planning of American academic library buildings during the 1980s and shares Richard Snyder's experiences in the design and construction of a new library building at Drexel University in Pennsylvania. Descriptions of general, economic, policy, psychological, and sociological problems in projecting technological developments are followed by an outline of design and construction considerations including modular design, library entrances, ceilings, floors, floor coverings, windows, walls, doors, HVAC (heating, ventilation, and air conditioning), acoustics, electrical power, lighting, energy usage, communications, security and safety, and future expansion. Guidelines on planning for library spaces are also provided, covering administrative organization; general space calculations; reader space; collection space for magnetic disks, video and optical disks, access to electronic publishing, microforms, reserve and reference materials, browsing and special collections, maps, and audiovisual materials; staff space; and other library facilities including public catalog areas, classrooms, exhibit space, and machine-repair and photographic space. It is emphasized throughout the paper that library buildings should be designed for the foreseeable future with a maximum of flexibility to accommodate future technological changes.

User Studies in ARL Libraries. SPEC Kit 101. By Jocelyn Foster. Association of Research Libraries, Washington, D.C. Feb. 1984. 127p. ED 241 065. MF—$0.83; PC—Not available from EDRS.

This collection of library documents, which illustrates current techniques for conducting user studies in order to facilitate specific public services planning and priority-setting efforts at the member libraries of the Association of Research Libraries (ARL), contains excerpts from (1) four general user studies conducted at the University of British Columbia, the University of New Mexico, New York University, and the University of California, Riverside; (2) three science user studies conducted at the University of

Colorado, the University of Arizona, and the University of Texas, Austin; (3) four automated services studies conducted at the University of Cincinnati, the University of Illinois, Pennsylvania State University, and Texas A & M University; and (4) three studies of special classes of library users conducted at the University of Arizona, Michigan State University, and Cornell University. Excerpts presented include sample questionnaires and descriptions of survey results. At the beginning, a concise summary of issues and trends related to library user studies covers types of survey methodology, types of information collected, and types of user and nonuser groups studied; a 12-item bibliography and an evaluation sheet for this ARL Systems and Procedures Exchange Center (SPEC) kit are also provided.

A Study of Collection Use at the University of Cincinnati Central Library. By Paul M. Anderson. 1983. 58p. MF—$0.83; PC—$4.82.

A usage study of monograph and serial library holdings at the University of Cincinnati was conducted in 1982 to select candidates for retrospective conversion of catalog records and to determine what materials would be housed in a remote storage facility. The study measured both in-house and circulation use for each Library of Congress (LC) subclassification. Methodologies from other use studies by L. E. Middleswort, Herman Fussler and J. L. Simon, Richard Trueswell, Allan Kent, and Mary Jane Pobst Reed were adapted for use in the Cincinnati study. It was found that material showing charges back to 1977 (six years) and 1975 would have to be kept in the main collection to satisfy circulation and in-house demand respectively; materials with recent imprints received far more use than older materials although it was not possible to determine a cutoff date that would enable the library to meet 90 percent of user needs; the overall ratio of monographs to serials used was 1.3 to 1 but this ratio changed rapidly over time; disciplines in the sciences and social sciences showed the greatest use of serials and materials with recent imprints; and the humanities demonstrated less use of serials and far more pronounced use of older materials. This report describes the study methodology and its results, uses in decision making, costs, and benefits. Extensive appendixes provide information on the distribution of usage by LC subclassification.

The User Friendliness of the Library Catalog. Occasional Papers Number 163. University of Illinois at Urbana-Champaign. Graduate School of Library and Information Science. Feb. 1984. 44p. ED 242 328. MF—$0.83; PC—Not available from EDRS.

This paper reviews nineteenth and twentieth century English-language literature dealing with the user friendliness of library catalogs and cataloging. Sections cover literature on (1) the need for catalogs and the possibility of substituting subject bibliographies for the subject catalog; (2) user needs and the dichotomy between designing catalogs based on individual needs and the standardization of cataloging; (3) the basic purposes of catalogs and cataloging; (4) the advantages and disadvantages of various physical catalog forms, including card, book, and microform catalogs; (5) methods of arranging catalogs in dictionary or divided format and the comparative advantages of alphabetical and classified catalogs; (6) the content of catalog records, especially the amount and type of information included; (7) the nature of catalog entries, specifically the number and type of entry points for each item in the collection; and (8) the arrangement of alphabetical entries, i.e., in true alphabetical or alphabetico-classed format. It is concluded that the literature of the library catalog shows a concern for the catalog user but that the concern has been unsystematic and based on untested assumptions regarding user needs and wants. A review of twelve objectives of a user-oriented system, as enumerated by Dehning, Essig, and Maass, and the author's vita conclude the publication.

Copyright Policies in ARL Libraries. SPEC Kit 102. Association of Research Libraries, Washington, D.C. Mar. 1984. 118p. ED 242 338. MF—$0.83; PC—Not available from EDRS.

This collection of copyright policies from member libraries of the Association of Research Libraries (ARL) contains (1) ARL briefing papers on reproduction of copyrighted materials for classroom use and current issues in library photocopying; (2) university copyright policies from New York University, Rutgers University, University of California–Davis, and University of Wisconsin; (3) university library general guidelines from University of Missouri–Columbia, Virginia Polytechnic Institute, and University of Virginia; (4) eight library reserve room policies; (5) photocopy guidelines from Columbia University, University of California–Los Angeles (UCLA), University of California–Riverside, and Yale University; (6) interlibrary loan copyright policies from Florida State University, University of California–Berkeley, and UCLA; (7) nine media and music reproduction policies; and (8) manuscripts and archives policies from Duke University, New York University, Notre Dame, and UCLA. A concise summary of copyright issues and trends focuses on reserve room policies; intra- and interlibrary copying guidelines; reproduction of music, media, and unpublished materials; copyright problems related to new information technology; and the public lending right. A 27-item bibliography and an evaluation sheet for this ARL Systems and Procedures Exchange Center (SPEC) kit are also provided.

OTHER PUBLICATIONS

Abel, Ernest L. *A Dictionary of Drug Abuse Terms and Terminology.* Westport, Conn.: Greenwood, 1984. 187p. $29.95 cloth. LC 83-22867. ISBN 0-313-24095-7.

Afro-American Fiction Writers After 1955. Ed. by Thadious M. Davis and Trudier Harris. Dictionary of Literary Biography, V.33. Detroit: Gale, 1984. 350p. $82 cloth. LC 84-18724. ISBN 0-8103-1711-7.

Allison, Roy. *Finland's Relations with the Soviet Union, 1944–1984.* New York: St. Martin's, 1985. 211p. $29.95 cloth. LC 84-17694. ISBN 0-312-29066-7.

American Colonial Writers, 1735–1781. Ed. by Emory Elliott. Dictionary of Literary Biography, V.31. Detroit: Gale, 1984. 421p. $82 cloth. LC 84-13533. ISBN 0-8103-1709-5.

Anderson, Robert O. *Fundamentals of The Petroleum Industry.* Norman: Univ. of Oklahoma Pr., 1984. 390p. $29.95 cloth. LC 84-40271. ISBN 0-8061-1909-8.

Annual Bibliography of British and Irish History. Ed. by G. R. Elton. New York: St. Martin's, 1984. 180p. $29.95 cloth. LC 81-641280. ISBN 0-312-69472-5.

Argentina, Australia and Canada: Studies in Comparative Development. Ed. by D.C.M. Platt and Guido Di Tella. New York: St. Martin's, 1985. 237p. $29.95 cloth. LC 84-17884. ISBN 0-312-04868-8.

Aronson, Jonathan David and Cowhey, Peter F. *Trade in Services: A Case for Open Markets.* Washington, D.C.: American Enterprise Institute (for Public Policy Research), 1984. 46p.

LC 84-72784. ISBN 0-8447-3570-1.

Aslib Directory of Information Sources in the United Kingdom: Social Sciences, Medicine and the Humanities. V.2. 5th ed. Ed. by Ellen M. Codlin. London: Aslib, 1984. 1,000p. $135 cloth. ISBN 0-85142-184-9.

Austrian Poetry Today—Osterreichische Lyrik heute. Ed. and trans. by Milne Holton and Herbert Kuhner. New York: Schocken, 1985. 274p. $25.50 cloth. LC 83-20221. ISBN 0-8052-3903-0.

Axe, John. *The Encyclopedia of Celebrity Dolls.* Cumberland, Maryland: Hobby House, 1983, 420p. $27.50 cloth. ISBN 0-87588-186-6.

Axe, John and Mandeville, A. Glenn. *Celebrity Doll Price Guide and Annual.* Cumberland, Maryland: Hobby House, 1984. 475p. $5.95 paper. ISBN 8-87588-255-0.

Barclay, Janet M. *Emily Bronte Criticism, 1900–1982: An Annotated Check List.* Westport, Conn.: Meckler, 1984. 162p. $40 cloth. LC 83-17433. ISBN 0-930466-63-2.

Basic Facts About The United Nations. New York: United Nations, 1984. 140p. $2.75 paper.

Beetz, Kirk H. *Tennyson: A Bibliography, 1827–1982.* Scarecrow Author Bibliographies, no. 68. Metuchen, N.J.: Scarecrow, 1984. 539p. $35 cloth. LC 84-1274. ISBN 0-8108-1687-3.

Bibliographies for African Studies 1980–1983. Comp. by Yvette Scheven. New York: Saur, 1984. 312p. $36 cloth. ISBN 3-598-10487-1.

Bodio, Stephen. *A Rage for Falcons.* New York: Schocken, 1984. 135p. $16.50 cloth. LC 84-5590. ISBN 0-8052-3931-6.

Bookman's Price Index: A Guide to Values of Rare and Other Out-of-Print Books. V.28. Ed. by Daniel F. McGrath. Detroit: Gale, 1984. 874p. $155 cloth. LC 64-8723. ISBN 0-8103-0641-7.

Breen, Jon L. *Novel Verdicts: A Guide to Courtroom Fiction.* Metuchen, N.J.: Scarecrow, 1984. 280p. $18.50 cloth. LC 84-14110. ISBN 0-8108-1741-1.

British Imperialism in the Nineteenth Century. Ed. by C. C. Eldridge. New York: St. Martin's, 1985. 72p. $29.95 cloth. LC 84-9984. ISBN 0-312-10299-2.

Brown, Dorothy S. *Handle With Care: A Question of Alzheimer's.* Buffalo, N.Y.: Prometheus, 1985. 120p. $14.95 cloth. LC 84-61253. ISBN 087975-271-8.

Bryan, George B. *An Ibsen Companion: A Dictionary-Guide to the Life, Works, and Critical Reception of Henrik Ibsen.* Westport, Conn.: Greenwood, 1984. 472p. $49.95 cloth. LC 83-18551. ISBN 0-313-23506-6.

Buckley, Peter J. and Casson, Mark. *The Economic Theory of the Multinational Enterprise.* New York: St. Martin's, 1985. 235p. $27.50 cloth. LC 84-18198. ISBN 0-312-23636-0.

Business Organizations and Agencies Directory. 2d ed. Ed. by Anthony T. Kruzas, Robert C. Thomas, and Kay Gill. Detroit: Gale, 1984 1,371p. $220 cloth. LC 84-4179. ISBN 0-8103-1199-2.

Campana, Dino. *Orphic Songs.* Trans. by Charles Wright. Field Translation Ser., no. 9. Oberlin, Ohio: Field Translation, 1984. 130p. $6.50 paper. LC 83-063448. ISBN 09-32440-169.

Cave, William C. and Maymon, Gilbert W. *Software Lifecycle Management: The Incremental Method.* New York: Macmillan, 1984. 172p. $27.95 paper. LC 84-11264. ISBN 0-02-949210-6.

Children's Literature Awards and Winners: A Directory of Prizes, Authors, and Illustrators. 1st ed. supplement. Ed. by Dolores B. Jones. Detroit: Gale, 1984. 136p. $50 paper. ISBN 0-8103-0173-3. ISSN 0749-3096.

Children's Literature Review: Excerpts from Reviews, Criticism, and Commentary on Books for Children. V.7. Ed. by Gerard J. Senick. Detroit: Gale, 1984. 276p. $70 cloth. LC 75-34953. ISBN 0-8103-0332-9.

Cole, Garold L. *Travels in America.* Norman: Univ. of Oklahoma Pr., 1985. 310p. $48.50 cloth. LC 84-40273. ISBN 0-8061-1791-5.

Committee on Cataloging: Description and Access Cataloging and Classification Section, Resources and Technical Services Division, American Library Assn. *Guidelines for Using AACR2 Chapter 9 for Cataloging Microcomputer Software.* Chicago: American Library Assn., 1984. $4.50 paper. 32p. LC 84-11168. ISBN 0-8389-3311-4.

Computer Applications in Ontario Government Libraries. Ed. by Brian H. Morrison. Toronto: Ontario Government Libraries' Council, 1984. 82p. $5 paper. ISBN 0-7743-9774-8.

Corenthal, Michael G. *Cohen on the Telephone: A History of Jewish Recorded Humor and Popular Music, 1892–1942.* Milwaukee, Wisc.: Yesterday's Memories, 1984. 107p. $12 paper. LC 110-397.

Cummings, Stephen and Ullman, Dana. *Everybody's Guide to Homeopathic Medicines: Taking Care of Yourself and Your Family with Safe and Effective Remedies.* Los Angeles: Tarcher, 1984. 312p. $8.95 paper. LC 84-8472. ISBN 0-87477-324-5.

de Lerma, Dominique-Rene. *Bibliography of Black Music: Theory, Education, and Related Studies.* V.4. Greenwood Encyclopedia of Black Music. Westport, Conn.: Greenwood, 1984. 254p. $39.95 cloth. LC 80-24681. ISBN 0-313-24229-1.

Development Policy and Planning: A Third World Perspective. Ed. by Pradip K. Ghosh. International Development Resource Books, no. 8.

Westport, Conn.: Greenwood, 1984. 626p. $55 cloth. LC 83-26492. ISBN 0-313-24144-9.

Diment, Judith A. and others. *Catalogue of the Natural History Drawings Commissioned by Joseph Banks on the Endeavour Voyage 1768–1771: Part 1: Botany: Australia.* Westport, Conn.: Meckler, 1984. 183p. $75 cloth. LC 84-4655. ISBN 0-930466-92-6.

Dissertations in the History of Education, 1970–1980. Comp. by Edward R. Beauchamp. Metuchen, N.J.: Scarecrow, 1985. 267p. $22.50 cloth. LC 84-14125. ISBN 0-8108-1742-X.

Doran, James M. *Erroll Garner: The Most Happy Piano.* Studies in Jazz, no. 3. Metuchen, N.J.: Scarecrow, 1985. 500p. $29.50 cloth. LC 84-17886. ISBN 0-8108-1745-4.

Downs, Robert B. *Perspectives on the Past: An Autobiography.* Metuchen, N.J.: Scarecrow, 1984. 240p. $17.50 cloth. LC 84-5589. ISBN 0-8108-1703-9.

Driver, John C. and Foxall, Gordon R. *Advertising: Policy and Practice.* New York: St. Martin's, 1984. 165p. $25 cloth. LC 84-40336. ISBN 0-312-00731-0.

Economic Integration and Third World Development. Ed. by Pradip K. Ghosh. International Development Resource Books, no. 12. Westport, Conn.: Greenwood, 1984. 397p. $45 cloth. LC 83-26686. ISBN 0-313-24148-1.

Economic Policy and Planning in the Third World. Ed. by Pradip K. Ghosh. International Development Resource Books, no. 7. Westport, Conn.: Greenwood, 1984. 711p. $59.95 cloth. LC 83-26493. ISBN 0-313-24143-0.

The Economics of Relative Prices: Proceedings of a Conference Held by the International Economic Association in Athens, Greece. Ed. by Bela Csikos-Nagy, Douglas Hague, and Graham Hall. New York: St. Martin's, 1985. 551p. $35 cloth. LC 83-40163. ISBN 0-312-23442-2.

Encyclopedia of Occultism & Parapsychology: A Compendium of Information on the Occult Sciences, Magic, Demonology, Superstitions, Spiritism, Mysticism, Metaphysics, Psychical Science, and Parapsychology. 3v. 2d ed. Ed. by Leslie A. Shepard. Detroit: Gale, 1984. 1,800p. $220 cloth. LC 84-3990. ISBN 0-8103-0196-2.

Engineering Research Centers: A World Directory of Organizations and Programmes. Ed. by T. Archbold, J. C. Laidlaw, and J. McKechnie. London: Longman, 1984. 1,031p. ISBN 0-582-90018-2.

Ericksen, Stanford C. *The Essence of Good Teaching.* San Francisco: Jossey-Bass, 1984. 180p. LC 84-47983. ISBN 0-87589-615-4.

European Marketing Data and Statistics 1984. 20th ed. London: Euromonitor, 1984. 360p. $175 cloth. ISBN 0-86338-012-3. Dist. by Gale.

Falcoff, Mark. *Small Countries Large Issues: Studies in U.S.–Latin American Asymmetries*. Washington, D.C.: American Enterprise Institute, 1984. 126p. LC 84-14634. ISBN 0-8447-3563-9.

Fike, John L. and Friend, George E. *Understanding Telephone Electronics*. 2d ed. Dallas: Texas Instruments Learning Center, 1984. 284p. $14.95 paper. LC 84-50902. ISBN 0-89512-159-X.

Fleming, Jacqueline. *Blacks in College: A Comparative Study of Students' Success in Black and in White Institutions*. San Francisco: Jossey-Bass, 1984. 276p. $19.95 cloth. LC 84-47984. ISBN 0-87589-616-2.

Il Fondo Guicciardini nella Biblioteca nazionale centrale di Firenze: catalogo, Sec. 19, A-F. Inventari e cataloghi toscani, 14. Firenze, Italy: La Nuova Italia, 1984. 278p. ISBN 88-221-0120-0.

Foreign Aid and Third World Development. Ed. by Pradip K. Ghosh. International Development Resource Books, no. 10. Westport, Conn.: Greenwood, 1984. 365p. $45 cloth. LC 83-26450. ISBN 0-313-24146-5.

Frew's Daily Archive: A Calendar of Commemorations. Comp. by Andrew W. Frew. Jefferson, N.C.: McFarland, 1984. 374p. $24.95 cloth. LC 84-42612. ISBN 0-89950-127-3.

Friend, George E. and others. *Understanding Data Communications*. Dallas: Texas Instruments, 1984. 268p. $14.95 paper. LC 84-50867. ISBN 0-89512-158-1.

Gibaldi, Joseph and Achtert, Walter S. *MLA Handbook for Writers of Research Papers*. 2d ed. New York: Modern Language Assoc., 1984. 221p. $7.50 paper. LC 84-10819. ISBN 0-87352-132-3.

Goodin, George. *The Poetics of Protest: Literary Form and Political Implication in the Victim-of-Society Novel*. Carbondale: Univ. of Illinois Pr., 1985. 220p. $19.95 cloth. LC 83-27179. ISBN 0-8093-1173-9.

The Grant's Register, 1985–1987. Ed. by Norman Frankel. New York: St. Martin's, 1984. 854p. $37.50 cloth. LC 77-12055. ISBN 0-312-34409-0.

Green, Karen. *Classic Cold Cuisine*. Los Angeles: Tarcher, 1984. 258p. $9.95 paper. LC 84-2752. ISBN 0-87477-336-9. Dist. by Houghton-Mifflin.

Greenberg, Jan. *The Teenager's Guide to the Best Summer Opportunities*. Boston: Harvard Common Pr., 1985. 197p. $9.95 paper. LC 84-19717. ISBN 0-916782-58-1.

Gysbers, Norman C. *Designing Careers: Counseling to Enhance Education, Work, and Leisure*. San Francisco: Jossey-Bass, 1984. 660p. LC 84-47986. ISBN 0-87589-618-9.

Haggin, B. H. *Music and Ballet, 1973–1983*. New York: Horizon, 1984. 282p. $18.95 cloth. LC 84-15739. ISBN 0-8180-1226-9.

Handbook of the Nations: A Brief Guide to the Economy, Government, Land, Demographics, Communications, and National Defense Establishments of Each of 191 Nations and Other Political Entities. 4th ed. Originally pub. and comp. by the U.S. Central Intelligence Agency as The World Fact Book. Detroit: Gale, 1984. 274p. $64 cloth. ISBN 0-8103-1647-1.

A Handlist of British Parliamentary Poll Books. Ed. by John Sims. Occasional Publication, no. 4. Univ. of Leicester History Dept. and Univ. of California, Riverside, 1984. 260p. $15 paper. ISBN 0-906696-04-6.

Harry S. Truman: A Bibliography of His Times and Presidency. Ed. by Richard Dean Burns. Wilmington, Del.: Scholarly Resources, 1984. 297p. $50 cloth. LC 84-20223. ISBN 0-8420-2219-8.

Heller, Michael. *Conviction's Net of Branches: Essays on the Objectivist Poets and Poetry*. Carbondale: Southern Illinois Univ. Pr., 1985. 126p. $13.50 cloth. LC 84-1339. ISBN 0-8093-1176-3.

Herman, Kali. *Women in Particular: An Index to American Women*. Phoenix, Ariz.: Oryx, 1985. 740p. $95 cloth. LC 84-1019. ISBN 0-89774-088-2.

Hollywood and American History: A Filmography of Over 250 Motion Pictures Depicting U.S. History. Comp. by Michael R. Pitts. Jefferson, N.C.: McFarland, 1984. 332p. $24.95 cloth. LC 84-42733. ISBN 0-89950-132-X.

International Business Travel and Relocation Directory: The Who, What, and Where Handbook for International Business Travel and Operations. 3d ed. Detroit: Gale, 1984. 978p. $300 cloth. LC 81-20111. ISBN 0-8103-1639-0.

International Financial Reporting: A Comparative International Survey of Accounting Requirements and Practice in 30 Countries. Ed. by S. J. Gray, L. G. Campbell, and J. C. Shaw. New York: St. Martin's, 1985. 584p. $45 cloth. LC 84-40409. ISBN 0-312-42202-4.

International Marketing Data and Statistics 1984. 9th ed. London: Euromonitor, 1984. 376p. $175 cloth. ISBN 0-86338-013-1. Dist. by Gale.

Kopp, Sheldon. *Even a Stone Can Be a Teacher: Learning and Growing from the Experiences of Everyday Life.* Los Angeles: Tarcher, 1985. 211p. $8.95 paper. LC 84-26695. ISBN 0-87477-341-5.

L'Archivio Ceramelli-Papiani: Conservato Dal Comune Di Colle Val D'Elsa. Comp. by Brunella Ragoni. Inventari e Cataloghi Toscani, no. 5. Firenze, Italy: La Nuova Italia, 1984. 71p. ISBN 88-221-0127-8.

Law and Legal Information Directory. 3d ed. Ed. by Paul Wasserman and Steven Wasserman. Detroit: Gale, 1984. 902p. $225 cloth. LC 82-48987. ISBN 0-8103-0174-1.

Lazerowitz, Morris and Ambrose, Alice. *Essays in the Unknown Wittgenstein.* Buffalo, N.Y.: Prometheus, 1984. 233p. $25.95 cloth. LC 83-62923. ISBN 0-87975-234-3.

Leckie, William H. and Leckie, Shirley A. *Unlikely Warriors: General Benjamin Grierson and His Family.* Norman: Univ. of Oklahoma Pr., 1984. 383p. $19.95 cloth. LC 84-40275. ISBN 0-8061-1912-8.

Leff, Lawrence S. and Podos, Arlene. *Computer Programming in Fortran the Easy Way.* Woodbury, N.Y.: Barron's, 1985. 256p. $7.95 paper. LC 84-18526. ISBN 0-8120-2800-7.

Levi, Primo. *The Periodic Table.* New York: Schocken, 1984. 240p. $16.95 cloth. LC 84-5483 ISBN 0-8052-3929-4.

Library Serials Standards: Development, Implementation, Impact: Proceedings of the Third Annual Serials Conference. Ed. by Nancy Jean Melin. Westport, Conn.: Meckler, 1984. 164p. $35 cloth. LC 84-3789. ISBN 0-88736-008-4.

Lightwood, Martha Bolar. *A Selected Bibliography of Significant Works About Adam Smith.* Philadelphia: Univ. of Pennsylvania Pr., 1984. 82p. $25 cloth. LC 84-3718. ISBN 0-8122-7930-1.

MacKenzie, Charles H. C.; Power, Michael E.; and McDorman, Ted L. *Liner Shipping Conferences: An Annotated Bibliography.* Lexington, Mass.: D. C. Heath, 1985. 149p. $23 cloth. LC 84-7165. ISBN 0-669-08660-6.

Malpractice and Liability in Child Protective Services. Ed. by Wayne Holder and Kathleen Hayes. Longmont, Colo.: Bookmakers Guild, 1984. 186p. LC 84-071635. ISBN 0-917665-02-3.

Manor, James. *Sri Lanka in Change and Crisis.* New York: St. Martin's, 1984. 229p. $25 cloth. LC 84-15921. ISBN 0-312-75452-3.

Marco, Guy A. *Opera: A Research and Information Guide.* Garland Reference Library of the Humanities, no. 468. New York: Garland, 1984. 371p. $45 cloth. LC 83-49312. ISBN 0-8240-8999-5.

Marquis Who's Who Directory of Online Professionals. Chicago: Marquis, 1984. 829p. $85 cloth. ISBN 0-8379-6001-0.

Marsh, Clifton E. *From Black Muslims to Muslims: The Transition from Separatism to Islam, 1930–1980.* Metuchen, N.J.: Scarecrow, 1984. 159p. $15 cloth. LC 84-5611. ISBN 0-8108-1705-5.

McCarthy, Jane and Ladimer, Irving. *Managing Faculty Disputes.* San Francisco: Jossey-Bass, 1984. 270p. $19.95 cloth. LC 84-47991. ISBN 0-87589-623-5.

McKenzie, Richard B. *Plant Closings: Public or Private Choices?* Washington, D.C.: CATO Institute, 1984. 333p. $9.50 paper. LC 84-14957. ISBN 0-932790-42-9.

McMullin, Thomas A. and Walker, David. *Biographical Directory of American Territorial Governors.* 353p. $75 cloth. LC 84-9095. ISBN 0-930466-11-X.

Mikhail, E. H. *Sean O'Casey and His Critics: An Annotated Bibliography, 1916–1982.* Scarecrow Author Bibliographies, no. 67. Metuchen, N.J.: Scarecrow, 1985. 362p. $25 cloth. LC 84-14166. ISBN 0-8108-1747-0.

MLA International Bibliography of Books and Articles on the Modern Languages and Literatures. Subject Index. V.1–5. New York: Modern Language Assn., 1984. 1,776p. ISBN 0-87352-451-9.

MLA International Bibliography of Books and Articles on the Modern Languages and Literatures. Volumes 1–5: Classified Listings with Author Index. New York: Modern Language Assn., 1984. 1,000p. ISBN 0-87352-449-7.

Mueller, Franz H. *The Church and the Social Question.* Washington, D.C.: American Enterprise Institute, 1984. 158p. LC 84-18548. ISBN 0-8447-3567-1.

Multi-National Corporations and Third World Development. Ed. by Pradip K. Ghosh. International Development Resource Books, no. 11. Westport, Conn.: Greenwood, 1984. 473p.

$45 cloth. LC 83-26680. ISBN 0-313-24147-3.

My Folks Don't Want Me To Talk About Slavery. Ed. by Belinda Hurmence. Winston-Salem, N.C.: John F. Blair, 1984. 103p. $14.95 cloth. LC 84-16891. ISBN 0-89587-038-X.

Natalle, Elizabeth J. *Feminist Theatre: A Study in Persuasion.* Metuchen, N.J.: Scarecrow, 1985. 163p. $15 cloth. LC 84-13965. ISBN 0-8108-1729-2.

Nathan, Joan. *An American Folklife Cookbook.* New York: Schocken, 1985. 249p. $18.95 cloth. LC 84-5430. ISBN 0-8052-3914-6.

National Directory of Newsletters and Reporting Services: A Reference Guide to Information Services, Financial Services, Association Bulletins, and Training and Educational Services. 2d ed. 8V. Ed. by Robert C. Thomas and Brigitte T. Darnay. Detroit: Gale, 1978–1984. 1,873p. $240 paper. LC 77-99180. ISBN 0-8103-0676-X.

Neal, James E., Jr. *Your Slice of the Melon: A Guide to Greater Job Success.* Perrysburg, Ohio: Neal, 1985. 112p. $4.95 paper. LC 84-90658. ISBN 0-9609006-0-8.

Nelson, Richard R. *High-Technology Policies: A Five-Nation Comparison.* Washington, D.C.: American Enterprise Institute, 1984. 94p. LC 84-21640. ISBN 0-8447-3565-5.

New International Economic Order: A Third World Perspective. Ed. by Pradip K. Ghosh. International Development Resource Books, no. 9. Westport, Conn.: Greenwood, 1984. 562p. $49.95 cloth. LC 83-26484. ISBN 0-313-24145-7.

Newman, John and Unsworth, Michael. *Future War Novels: An Annotated Bibliography of Works in English Published Since 1946.* Phoenix, Ariz.: Oryx, 1984. 101p. $25 cloth. LC 83-43245. ISBN 0-89774-103-X.

Nicholas, Robin and Nicholas, David. *Virology: An Information Profile.* London: Mansell, 1983. 236p. $32 cloth. ISBN 0-7201-1673-2.

Nierman, Judith. *Floyd Dell: An Annotated Bibliography of Secondary Sources, 1910–1981.* Scarecrow Author Bibliographies, no. 69. Metuchen, N.J.: Scarecrow, 1984. 208p. $15 cloth. LC 84-13852. ISBN 0-8108-1718-7.

Online Catalogs/Reference Converging Trends: Proceedings of a Library and Information Technology Association Preconference Institute, June 23–24, 1983, Los Angeles. Library and Information Technology Ser., no. 2. Chicago: American Library Assn., 1984. 211p. $20 paper. LC 84-11023. ISBN 0-8389-3308-4.

Ornstein, Norman J. and others. *Vital Statistics on Congress, 1984–1985 Edition.* Washington, D.C.: American Enterprise Institute, 1985. 261p. LC 84-20401. ISBN 0-8447-3564-7.

Ostrow, Rona and Smith, Sweetman R. *The Dictionary of Retailing.* New York: Fairchild, 1985. 264p. $25 cloth. LC 84-82074. ISBN 0-87005-437-6.

Palmer, Roger C. *dBase II and dBase III: An Introduction for Information Services.* 2d ed. Studio City, Calif.: Pacific Information, 1984. 45p. $25 paper. LC 84-20654. ISBN 0-913203-09-2.

Palmer, Joseph W. *Oral History in Public Libraries.* Occasional Papers, no. 167, December 1984. Urbana: Univ. of Illinois, Graduate School of Library and Information Science, 1984. 33p. $3 paper.

Partisan Review: Fifty-Year Cumulative Index. V. 1–50, 1934–1983. AMS Studies in Modern Literature, no. 15. New York: AMS Pr., 1984. 332p. $57.50 cloth. LC 42-20197. ISBN 0-404-61585-6.

Passenger and Immigration Lists Bibliography, 1538–1900: Being a Guide to Published Lists of Arrivals in the United States and Canada. 1st supplement. Ed. by William Filby. Detroit: Gale, 1984. 132p. $64 paper. LC 84-13702. ISBN 0-8103-1644-7.

Perspectives on Abortion. Ed. by Paul Sachdev. Metuchen, N.J.: Scarecrow, 1985. 293p. $22.50 cloth. LC 84-10573. ISBN 0-8108-1708-X.

Pesek-Marous, Georgia. *The Bull: A Religious and Secular History of Phallus Worship and Male Homosexuality.* Rolling Hills, Calif.: Tau Pr., 1984. 185p. $9.95 paper. LC 84-50280. ISBN 0-916453-01-4.

Plant-Microbe Interactions: Molecular and Genetic Perspectives. V. 1. Ed. by Tsune Kosuge and Eugene W. Nester. New York: Macmillan, 1984. 444p. $38 cloth. LC 84-12260. ISBN 0-02-949470-2.

Policies into Practice: National and International Case Studies in Implementation. Ed. by David Lewis and Helen Wallace. New York: St. Martin's, 1985. 234p. $25 cloth. LC 84-8221. ISBN 0-312-61997-9.

Political Parties of the World. 2d ed. Comp. and ed. by Alan J. Day and Henry W. Degenhardt. Detroit: Gale, 1984. 602p. $90 cloth. LC 80-83467. ISBN 0-8103-2034-7.

Pollack, Sandy. *Alternative Careers for Teachers.* Rev. ed. Boston: Harvard Common Pr., 1984. 160p. $15.95 paper. LC 84-19727. ISBN 0-916782-60-3.

Pomeroy, Sarah B. *Women in Hellenistic Egypt From Alexander to Cleopatra.* New York: Schocken, 1984. 241p. $16.95 cloth. LC 84-3122. ISBN 0-8052-3911-1.

Popular Music: An Annotated Index of American Popular Songs. 1970–1974. V.7. Ed. by Bruce Pollock. Detroit: Gale, 1984. 360p. $55 cloth. LC 64-23761. ISBN 0-8103-0845-2.

Popular Music: An Annotated Index of American

Popular Songs. 1945–1979. V.8. Ed. by Bruce Pollock. Detroit: Gale, 1984. 368p. $55 cloth. LC 64-23761. ISBN 0-8103-0846-0.

Proceedings of the Seventeenth Meeting of the Geoscience Information Society, October 17–20, 1982, New Orleans, Louisiana: Geologic Hazards Data. Ed. by Regina A. Brown. Alexandria, Va.: Geoscience Information Society, 1984. 146p. $20 paper.

Psychware: A Reference Guide to Computer-Based Products for Behavioral Assessment in Psychology, Education, and Business. Comp. and ed. by Samuel E. Krug. Kansas City, Mo.: Test Corp. of America, 1984. 801p. $65 cloth. LC 84-16461. ISBN 0-9611286-5-8. Dist. by Gale.

Publications on International Agricultural Research and Development. Manila: International Rice Research Institute, 1984. 539p. $4.20 paper. ISBN 971-104-122-7.

Reassessing Arms Control. Ed. by David Carlton and Carlo Schaerf. New York: St. Martin's, 1985. 211p. $27.50 cloth. LC 84-40339. ISBN 0-312-66545-8.

Reed-Scott, Jutta. *Issues in Retrospective Conversion: Report of a Study Conducted for the Council on Library Resources.* Washington, D.C.: Council on Library Resources, 1984. 57p. $3 paper. LC 84-15548.

Research Services Directory: A Guide to Laboratories, Consultants, Firms, Data Collection and Analysis Centers, Individuals, and Other Facilities in the Private Sector . . . Supplement, 2 issues, 2d ed. Detroit: Gale, 1985. 94p. $140 paper. ISBN 0-8103-0249-7.

Responding to New Realities in Funding. Ed. by Larry L. Leslie. New Directions For Institutional Research, no. 43. San Francisco: Jossey-Bass, 1984. 106p. $8.95 paper. LC 83-82729. ISBN 97589-776-2.

Riggar, T. F. *Stress Burnout: An Annotated Bibliography.* Carbondale: Southern Illinois Univ. Pr., 1985. 299p. $19.95 cloth. LC 84-5447. ISBN 0-8093-1186-0.

Robinson, William C. *Complaint Handling in the Library.* Occasional Papers, no. 166. December 1984. Urbana: Univ. of Illinois, Graduate School of Library and Information Science, 1984. 34p. $3 paper.

Russell, James. *Explaining Mental Life: Some Philosophical Issues in Psychology.* New York: St. Martin's, 1985. 291p. $25 cloth. LC 83-40545. ISBN 0-312-27743-1.

Schneider, Ben Ross, Jr. *My Personal Computer and Other Family Crises.* New York: Macmillan, 1984. 246p. $15.95 cloth. LC 84-14392. ISBN 0-02-949610-1.

Schullery, Paul. *Mountain Time.* New York: Schocken, 1984. 221p. $17.95 cloth. LC 84-5586. ISBN 0-8052-3932-4.

Searles, George J. *The Fiction of Philip Roth and*

John Updike. Carbondale: Southern Illinois Univ. Pr., 1984. 197p. $16.95 cloth. LC 84-1269. ISBN 0-8093-1175-5.

Selby, Spencer. *Dark City: The Film Noir.* Jefferson, N.C.: McFarland, 1984. 254p. $18.95 cloth. LC 83-19984. ISBN 0-89950-103-6.

Siegel, Patricia Joan and Finley, Kay Thomas. *Women in the Sciences: An American Bio-Bibliography, 1724–1979.* Metuchen, N.J.: Scarecrow, 1985. 417p. $32.50 cloth. LC 84-20290. ISBN 0-8108-1755-1.

Smith, Robert V. *Graduate Research: A Guide for Students in the Sciences.* Philadelphia: Institute for Scientific Information Pr., 1984. 182p. $14.95 paper. LC 84-15711. ISBN 0-89495-038-X.

Starr, Herbert F. *Estate Planning Made Easy.* Cockeysville, Md.: Liberty, 1984. 160p. $9.95 paper. LC 83-82658. ISBN 0-89709-127-2.

Stress in Childhood. Ed. by James H. Humphrey. Studies in Modern Society: Political and Social Issues, no. 17. New York: AMS Pr., 1984. 327p. $32.50 cloth. LC 83-45028. ISBN 0-404-61624-0.

Strike, Kenneth A. and Soltis, Jonas F. *The Ethics of Teaching.* New York: Teachers College Pr., 1984. 112p. $8.95 paper. LC 84-2557. ISBN 0-8077-2709-1.

Sutton, George Mikskch. *Fifty Common Birds of Oklahoma and the Southern Great Plains.* Norman: Univ. of Oklahoma Pr., 1984. 144p. $14.95 cloth. LC 77-24336. ISBN 0-8061-1439-8.

Sybouts, Ward and Krepel, Wayne J. *Student Activities in the Secondary Schools: A Handbook and Guide.* Westport, Conn.: Greenwood, 1984. 428p. $37.50 cloth. LC 83-18535. ISBN 0-313-23379-9.

Thompson, Virginia and Adloff, Richard. *Historical Dictionary of the People's Republic of the Congo.* 2d ed. African Historical Dictionaries, no. 2. Metuchen, N.J.: Scarecrow Pr., 1984. 263p. $18.50 cloth. LC 84-13919. ISBN 0-8108-1716-0.

Tice, Patricia M. *Gardening in America, 1830–1910.* New York: Strong Museum, 1984. 94p. $9.95 paper. LC 84-8806.

Tuska, Jon and Piekaarski, Vicki. *The Frontier Experience: A Reader's Guide to the Life and Literature of the American West.* Jefferson, N.C.: McFarland, 1984. 434p. $29.95 cloth. LC 84-42611. ISBN 0-89950-118-4.

Twentieth-Century Literary Criticism. V. 14. Ed. by Dennis Poupaard and James E. Person, Jr. Detroit: Gale, 1984. 593p. $82 cloth. LC 76-46132. ISBN 0-8103-0228-4.

The United States Navy and Coast Guard, 1946–1983: A Bibliography of English-Language Works and 16mm Films. Comp. by Myron J. Smith, Jr. Jefferson, N.C.: McFarland, 1984. 539p. $49.95 cloth. LC 84-42605. ISBN 0-89950-122-2.

Victorian Poets Before 1850. Ed. by William E. Fredeman and Ira B. Nadel. Dictionary of Literary Biography, V. 32. Detroit: Gale, 1984. 417p. $82 cloth. LC 84-18781. ISBN 0-8103-1710-9.

Video Source Book. 6th ed. Syosset, N.Y.: National Video Clearinghouse, 1984. 1,809p. $135 cloth. LC 82-61690. ISBN 0-935478-24-8. Dist. by Gale.

Wall, C. Edward. *Abbreviations: The Comprehensive Dictionary of Abbreviations and Letter Symbols for the Computer Era.* 2v. Ann Arbor, Mich.: Pierian, 1984. $98 cloth. LC 84-60677. ISBN 0-87650-179-X(V.1), 0-87650-183-8(V.2).

Watten, Barrett. *Total Syntax.* Carbondale: Southern Illinois Univ. Pr., 1984. 241p. $13.95 paper. LC 83-20295. ISBN 0-8093-1179-8.

Webb, T. D. *Reorganization in the Public Library.* Phoenix, Ariz.: Oryx, 1985. 120p. $35 cloth. LC 82-42917. ISBN 0-89774-074-2.

Wedeen, Richard P. *Poison in the Pot: The Legacy of Lead.* Carbondale: Southern Illinois Univ. Pr., 1984. 274p. $24.95 cloth. LC 84-2296. ISBN 0-8093-1156-9.

Wellisch, Hans H. *Indexing and Abstracting, 1977–1981: An International Bibliography.* Santa Barbara, Calif.: ABC-Clio, 1984. 276p. $45 cloth. LC 84-3064. ISBN 0-87436-398-5.

Who's Who in Technology Today. 4th ed. 5v. Ed. by Barbara A. Tinucci. Lake Bluff, Ill.: J. Dick Pub., 1984. $425 cloth. LC 80-644137. ISSN 0190-4841.

Wilcox, Russell E. *Computer and Microcomputer Systems for Small Businesses.* Phoenix, Ariz.: Oryx, 1985. 242p. $27.50 cloth. LC 83-43246. ISBN 0-89774-131-5.

Winston, Roger B., Jr. and others. *Developmental Academic Advising.* San Francisco: Jossey-Bass, 1984. 571p. $29.95 cloth. LC 84-48001. ISBN 0-87589-633-2.

Worthington Miner. Interview by Franklin J. Schaffner. Directors Guild of America Oral History. Metuchen, N.J.: Scarecrow, 1984. 323p. $22.50 cloth. LC 84-14080. ISBN 0-8108-1740-3.

Writers For Young Adults: Biographies Master Index. Ed. by Adele Sarkissian. Gale Biographical Index Series, no. 6. Detroit: Gale, 1984. 354p. $85 cloth. LC 79-13228. ISBN 0-8103-1473-8.

Zarzyski, Paul. *The Make-Up of Ice.* Athens: Univ. of Georgia Pr., 1984. 55p. $10.95 cloth. LC 84-2479. ISBN 0-8203-0730-0.

Zusne, Leonard. *Biographical Dictionary of Psychology.* Westport, Conn.: Greenwood, 1984. 563p. $49.95 cloth. LC 83-18326. ISBN 0-313-24027-2.

MICROLINX

A Microcomputer Based Serials Control System

Call Us.

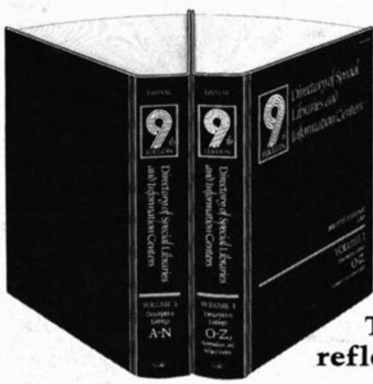
800-225-6055 (toll free)

617-329-3350 (collect)

faxon

DSL is a key to the holdings, services, and personnel of 17,250 s|
libraries, information centers, and archives in the U.S. and Cana
appendixes cover:

- 800 Networks and Consortia
- Libraries for the Blind and Handicapped
- Patent Depository Libraries
- Federal Information Centers
- Federal Job Center
- UN Depository Lil the U.S. and Cana
- Regional Governm Documents Depos



Directory of Spec Libraries and Information Centers

The new 9th edition of *DSL* reflects the high technology trend.

Many new high technology library holdings combine traditional and electronic reference materials. Providing access to this important group of libraries, the category "Computer Science" has been added to the more than two dozen broad subject categories used by *DSL*.

Vol. 1. **Special Libraries and Information Centers in the United States and Canada.** 9th edition. Edited by Brigitte T. Darnay. About 1,700 pages in 2 parts. Subject Index. Appendixes. $320.00. (Ready June)

Companion volume also available:

Vol. 2. **Geographic and Personnel Indexes.** Two additional approaches to the libraries and people included in Vol. 1. The Geographic Section lists the institutions by state or province. The Personnel Section is an alphabetical roster of all library personnel mentioned in Vol. 1. About 900 pages. $265.00. (Ready June)

The 17,250 entries provide up to 25 points of information including:

- Name, address, and phone number
- Sponsoring organization
- Information specialty
- Name of person in charge and other professional staff members
- Holdings
- Special collections
- Publications
- And more.

(SO) Available at Gale's 5% Standing Order Discount. Deduct 5% if you send check order. All Gale books are sent on 60-day approval. Customers outside the U.S. and Canada add 10%.

Gale Research Company

Book Tower • Detroit, MI 48226

To order by phone: 800-223-GALE toll free. In Canada, Michigan, Alaska, and Hawaii: 313-961-2242.